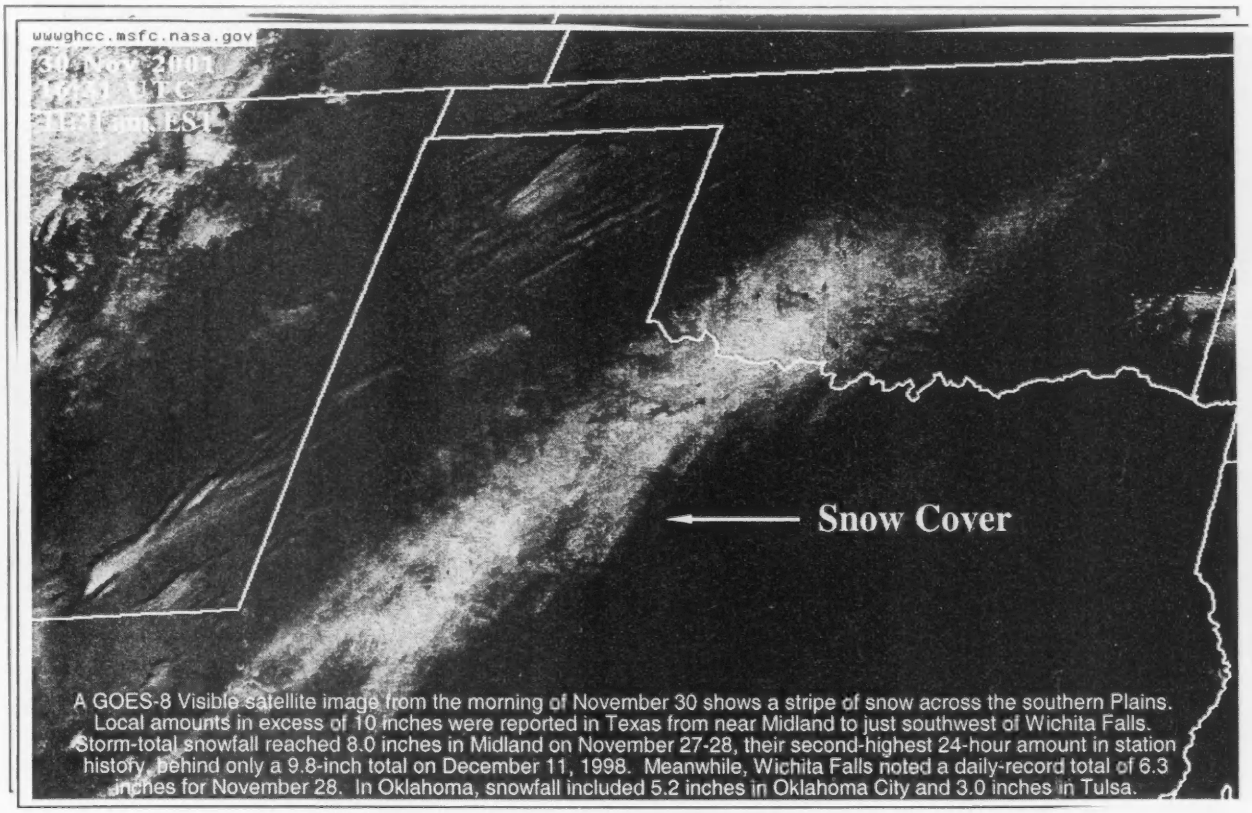
Volume 88, No. 49 http://www.usda.gov/oce/waob/jawf/wwcb.html December 4, 2001

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
and World Agricultural Outlook Board



A GOES-8 Visible satellite image from the morning of November 30 shows a stripe of snow across the southern Plains. Local amounts in excess of 10 inches were reported in Texas from near Midland to just southwest of Wichita Falls. Storm-total snowfall reached 8.0 inches in Midland on November 27-28, their second-highest 24-hour amount in station history, behind only a 9.8-inch total on December 11, 1998. Meanwhile, Wichita Falls noted a daily-record total of 6.3 inches for November 28. In Oklahoma, snowfall included 5.2 inches in Oklahoma City and 3.0 inches in Tulsa.

HIGHLIGHTS

November 25 - December 1, 2001

Highlights provided by USDA/WAOB

Heavy rainfall, totaling 4 to 15 inches, halted fieldwork and caused flooding from the **western Gulf Coast region to the lower Ohio Valley**, including the **Delta**. In contrast, dryness intensified across the **Southeast**, hampering the development of drought-stressed winter grains and bringing a renewed threat of wildfire activity. In addition, **Southeastern** temperatures averaged 10 to nearly 20°F above normal. Meanwhile in the **Corn Belt**, conditions ranged from mild and wet in eastern portions of the region to cold and snowy across northwestern areas. Widespread **Midwestern** precipitation halted autumn fieldwork, including final summer crop

(Continued on page 3)

Contents

Weather Data for the Delta and Bootheel &
November Temperature Records 2
November Precipitation Records 3
Total Precipitation &
Temperature Departure Maps 4
Extreme Maximum &
Minimum Temperature Maps 5
National Weather Data for Selected Cities 6
National Agricultural Summary &
Snow Cover Map 9
International Weather and Crop Summary &
November Temperature/Precipitation Table ... 10
Subscription Information &
November 27 Drought Monitor 16

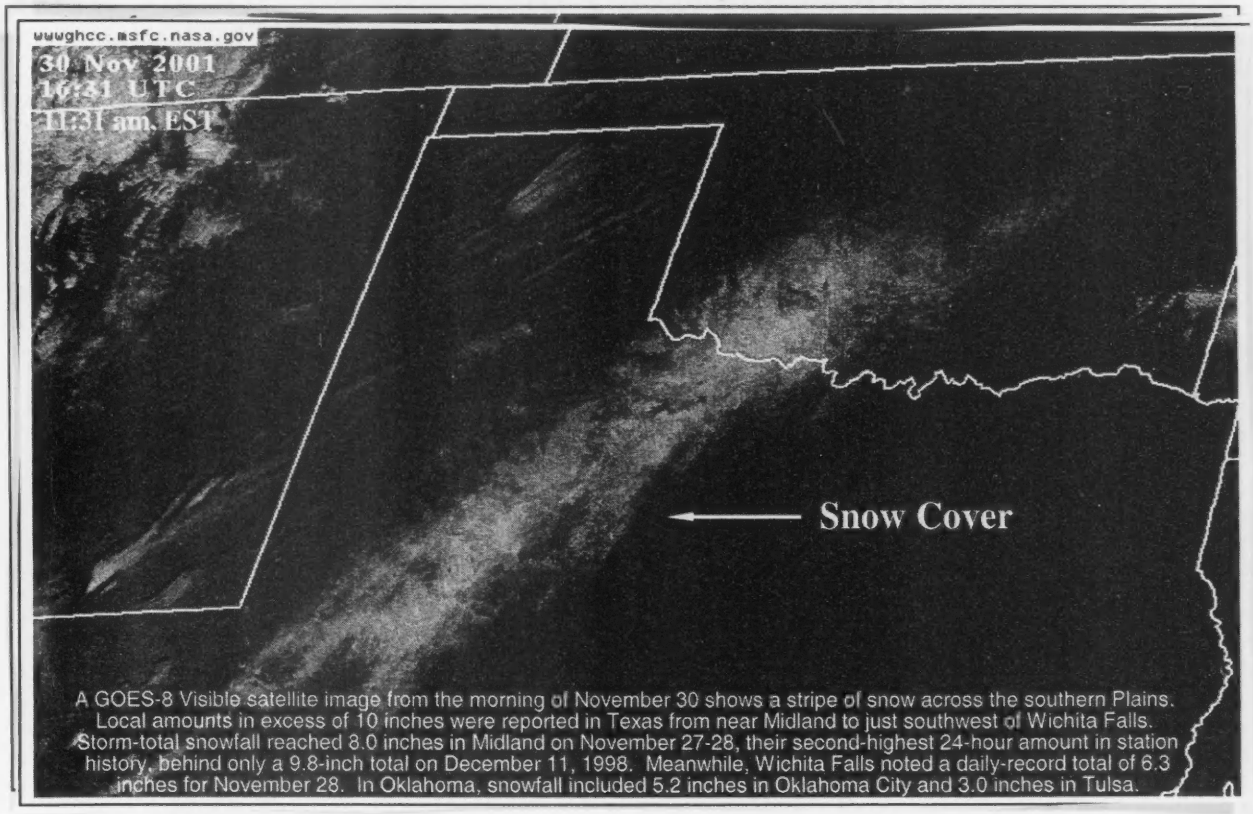
THE PAPER AND INK USED IN THE ORIGINAL PUBLICATION MAY AFFECT THE QUALITY OF THE MICROFORM EDITION

Volume 88, No. 49 http://www.usda.gov/oce/waob/jawf/wwcb.html December 4, 2001

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
and World Agricultural Outlook Board



A GOES-8 Visible satellite image from the morning of November 30 shows a stripe of snow across the southern Plains. Local amounts in excess of 10 inches were reported in Texas from near Midland to just southwest of Wichita Falls. Storm-total snowfall reached 8.0 inches in Midland on November 27-28, their second-highest 24-hour amount in station history, behind only a 9.8-inch total on December 11, 1998. Meanwhile, Wichita Falls noted a daily-record total of 6.3 inches for November 28. In Oklahoma, snowfall included 5.2 inches in Oklahoma City and 3.0 inches in Tulsa.

HIGHLIGHTS

November 25 - December 1, 2001

Highlights provided by USDA/WAOB

Heavy rainfall, totaling 4 to 15 inches, halted fieldwork and caused flooding from the **western Gulf Coast region to the lower Ohio Valley**, including the **Delta**. In contrast, dryness intensified across the **Southeast**, hampering the development of drought-stressed winter grains and bringing a renewed threat of wildfire activity. In addition, **Southeastern** temperatures averaged 10 to nearly 20°F above normal. Meanwhile in the **Corn Belt**, conditions ranged from mild and wet in eastern portions of the region to cold and snowy across northwestern areas. Widespread **Midwestern** precipitation halted autumn fieldwork, including final summer crop

(Continued on page 3)

Contents

Weather Data for the Delta and Bootheel &
November Temperature Records 2
November Precipitation Records 3
Total Precipitation &
Temperature Departure Maps 4
Extreme Maximum &
Minimum Temperature Maps 5
National Weather Data for Selected Cities 6
National Agricultural Summary &
Snow Cover Map 9
International Weather and Crop Summary &
November Temperature/Precipitation Table ... 10
Subscription Information &
November 27 Drought Monitor 16

Weather Data for Selected Locations in the Delta and the Bootheel

Weather Data for the Week Ending December 1, 2001

Data provided by the Mississippi State Delta Research and Extension Center (DREC), the Southern Regional Climate Center (SRCC), and the University of Missouri.

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							4-INCH SOIL TEMP, °F		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
MS	BATESVILLE [X]	62	44	76	36	53	5	15.45	14.14	8.50	0.00	0	55.89	115	--	--	0	0	5	4
	BELZONI [X]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	CLARKSDALE [X]	62	41	75	37	52	1	6.44	5.25	6.00	0.00	0	--	--	--	--	0	0	4	1
	CLEVELAND [X]	60	41	76	37	51	0	7.20	6.15	3.20	0.00	0	57.88	133	--	--	0	0	5	3
	GREENVILLE [X]	61	43	76	37	52	1	11.15	9.67	6.25	0.00	0	57.75	126	--	--	0	0	4	4
	GREENWOOD [X]	66	44	78	36	55	4	7.60	6.34	3.52	0.00	0	56.21	123	--	--	0	0	3	3
	INDIANOLA 1S	62	43	75	38	53	--	9.35	--	3.18	0.00	--	59.44	--	58	52	0	0	4	4
	INVERNESS 5E	64	45	76	39	55	--	9.33	--	4.13	0.00	--	52.84	--	60	54	0	0	3	3
	LYON	59	41	72	37	50	--	11.00	--	4.53	0.00	--	65.08	--	58	50	0	0	4	4
	MOORHEAD [X]	64	45	77	39	55	4	9.31	7.98	4.02	0.00	0	51.96	111	--	--	0	0	3	3
	ONWARD	64	43	77	38	54	--	9.36	--	3.75	0.00	--	49.28	--	59	54	0	0	3	3
	ROLLING FORK [X]	64	44	79	38	54	3	6.91	5.58	3.76	0.00	0	43.95	95	--	--	0	0	4	4
	SCOTT	60	42	74	37	51	--	7.78	--	2.71	0.00	--	--	--	58	49	0	0	4	4
	SIDON	66	45	77	40	56	--	6.77	--	3.34	0.00	--	45.85	--	62	52	0	0	4	3
	TUNICA [X]	59	43	72	38	51	3	10.42	9.20	6.80	0.00	0	49.56	109	--	--	0	0	5	3
	TUNICA 1W	59	40	72	36	50	--	9.33	--	4.91	0.00	--	48.48	--	56	49	0	0	4	3
	VANCE	63	43	75	37	53	--	10.59	--	5.24	0.00	--	--	--	59	53	0	0	4	4
	VICKSBURG [X]	66	46	74	38	56	2	10.25	9.04	4.85	0.00	0	67.03	137	--	--	0	0	5	5
	YAZOO CITY [X]	67	44	78	37	56	4	6.61	5.26	2.92	0.00	0	55.91	114	--	--	0	0	4	4
	STONEVILLE *	61	43	76	37	52	3	11.19	9.69	6.44	0.00	0	61.63	132	60	52	0	0	4	4
MO	CARDWELL	55	38	66	32	46	2	4.32	2.84	2.44	0.00	0	36.22	76	54	49	0	0	3	3
	CHARLESTON	54	39	64	33	46	3	4.71	3.32	1.99	0.00	0	35.37	79	52	45	0	0	3	3
	CLARKTON	54	38	64	31	46	3	4.66	3.48	2.52	0.00	0	38.72	92	--	--	0	1	4	3
	DELTA	52	36	63	29	45	2	3.05	1.52	1.20	0.00	0	31.79	67	49	43	0	1	3	3
	GLENNONVILLE	53	39	64	32	46	3	4.59	3.41	2.16	0.00	0	34.43	82	52	47	0	1	4	3
	PORTAGEVILLE #1	55	41	66	34	47	3	4.14	2.76	1.97	0.00	0	39.21	84	53	46	0	0	4	3
	PORTAGEVILLE #2	56	40	67	35	47	3	4.09	2.71	2.18	0.00	0	35.27	76	53	47	0	0	3	2
	STEELE	55	41	67	35	47	3	3.83	2.33	2.14	0.00	0	42.13	88	53	47	0	0	3	2

Compiled by USDA/OCE/WAOB's Stoneville Field Office. * Based on 1964-93 normals. [X] Based on 1961-90 normals.

Delta and Bootheel Weather and Crop Summary: Torrential rains plagued the Delta for the majority of the week. A stalled frontal boundary helped to produce the heavy rainfall. Some winter wheat was damaged due to flooding, but the extent of damage was not yet known. Fieldwork ceased due to the excessive wetness.

November Temperature Records

Highest November Average Temperature (°F)

Location	Average	Departure	Previous Record/Year
Phoenix, AZ	68.4	+ 6.5	68.0 in 1999
Jackson, KY	54.9	+ 7.2	54.4 in 1985
Washington, DC	54.8	+ 5.0	54.4 in 1975 and 1979
Central Park, NY	52.7	+ 5.1	52.5 in 1979
Burlington, IA	50.3	+ 9.7	49.4 in 1931
Des Moines, IA	49.8	+10.8	47.4 in 1999
Moline, IL	49.8	+10.2	47.4 in 1931
South Bend, IN	48.5	+ 7.6	48.1 in 1975
Waterloo, IA	47.9	+12.2	43.7 in 1931
Cedar Rapids, IA	47.8	+10.3	47.2 in 1899
Youngstown, OH	47.7	+ 6.7	46.2 in 1975
Mansfield, OH	47.6	+ 6.0	46.2 in 1994
LaCrosse, WI	47.5	+11.9	43.2 in 1931
Milwaukee, WI	47.4	+10.1	47.1 in 1931
Grand Island, NE	46.8	+ 9.2	46.2 in 1917
Dubuque, IA	46.6	+10.3	45.9 in 1931
Lansing, MI	46.3	+ 8.0	45.6 in 1931
Rochester, MN	45.4	+12.8	40.4 in 1913
Mason City, IA	45.4	+11.4	41.5 in 1913 and 1999
Madison, WI	46.0	+10.9	44.8 in 1931
Green Bay, WI	43.4	+ 9.0	43.2 in 1931
Alpena, MI	42.8	+ 7.1	41.4 in 1948
Houghton Lake, MI	42.2	+ 7.0	41.5 in 1963
Wausau, WI	42.0	+ 9.5	40.4 in 1999
Iron Mountain, MI	41.1	+ 9.0	38.5 in 1999
Ironwood, MI	40.9	+10.7	38.8 in 1931
Marquette, MI	39.9	+10.4	37.2 in 1999
Fargo, ND	39.7	+11.0	37.9 in 1899
Grand Forks, ND	36.5	+ 9.4	36.0 in 1981

(Continued from front cover)
harvesting, but recharged soil moisture reserves across the previously dry **northwestern Corn Belt**. On the **Plains**, significant snow fell across much of **South Dakota** and **Nebraska** on November 26-27 and the **southern Plains** on November 27-28. The snow boosted soil moisture and insulated winter wheat against sharply colder weather (weekly temperatures ranged from 4 to 14°F below normal), but largely bypassed the drought-stricken **northern High Plains**. In addition, unfavorably dry pockets persisted in parts of **Oklahoma** and **southern Kansas**. Farther west, heavy precipitation continued to ease long-term drought and boost high-elevation snow packs across **northern California**, the **Great Basin**, and the **Northwest**. Despite the promising start to the **Western** wet season, reservoirs in most drought-affected areas will need several more months of heavy rain and snow to ensure full recovery from the 20-month precipitation deficit.

Record warmth prevailed throughout the week in the **East**, resulting in at least six dozen daily-record highs. On November 27, **Augusta, GA**, posted a record high of 83°F. A day later, **Raleigh-Durham, NC**, notched their first of two daily records (81 and 77°F). At week's end, December opened with record warmth in more than 20 locations, including **Richmond, VA** (74°F), **Philadelphia, PA** (72°F), and **Portland, ME** (66°F). **Maine's** warm spell followed a period of wintry weather across the northern part of the State that produced 8.2 inches of snow in **Caribou** from November 27-30. Farther west, cold weather briefly visited the **Plains**. On November 28, lows in **Nebraska** included -2°F in **North Platte** and -4°F in **Scottsbluff**. Lows in **Wyoming** fell to -13°F in **Rawlins** and -15°F in **Laramie**. A day later, **Midland, TX**, noted 11°F, a record for November 29.

Late-month snow storms blanketed the **northern Plains** and **upper Midwest** on November 26-27 and the **southern Plains** on November 27-28. The first storm left 30.4 inches of snow in **Willmar, MN**, just shy of the station's storm-total snowfall record of 30.7 inches, set from November 29 - December 2, 1985. Elsewhere in the **upper Midwest**, late-November snowfall included 15.0 inches in **Mitchell, SD**, and 11.8 inches in **St. Cloud, MN**. Heavy snow also fell in the **upper Great Lakes region**, where **Marquette, MI**, netted 33.1 inches. **Marquette's** total included 19.2 inches on November 27, their highest calendar-day snowfall on record during November. Despite the late-month snow, temperatures remained above normal in most **upper Midwestern and Great Lakes** locations. For example, December 1 marked the 35th consecutive day (starting October 28) with above-normal temperatures in **Minneapolis, MN**. Farther to the south and east, November ended as it began, mild and snowless. In **southeastern Minnesota**, **Rochester** concluded their first autumn (September-November) on record without a measurable snowfall. Previously, **Rochester's** latest first measurable snowfall was observed on November 29, 1960. Meanwhile, **Buffalo, NY**, ended November without even a trace of snow, breaking their record of a trace set in 1899, 1918, and 1946. Just last year, a record 45.6 inches of snow buried **Buffalo** during November.

A second storm developed across the **southern Plains** on November 27-28, producing local snowfall totals in excess of 10 inches in **Texas** from near **Midland** to just southwest of **Wichita Falls**. **Midland's** snowfall reached 8.0 inches, their second-highest 24-hour amount on record, behind a 9.8-inch total on December 11, 1998. Elsewhere, storm-total snowfall reached 6.3 inches in **Wichita Falls** and 5.2 inches in **Oklahoma City, OK**. Farther east, both storms contributed to torrential rainfall from **eastern Texas to southern Indiana**. In **Mississippi**, **Stoneville** experienced their wettest 3-day (10.14 inches from November 27-29) and 4-day (11.19 inches from November 27-30) periods on record, surpassing the marks of 10.03 and 10.04 inches, established from April 27-29 and 27-30, 1991. In **western Tennessee**, **Memphis** received 5.86 inches on November 28, their sixth-highest daily amount on record, and a November 28-29 total of 8.35 inches. In **eastern Texas**, **Houston** netted a 24-hour total of 1.83 inches on November 27-28, propelling the city to its wettest year (65.01 inches, or 153 percent of normal, through November) since 70.16 inches fell in 1963.

In the **West**, a series of storm systems produced heavy precipitation and high winds. On November 25, winds in **Arizona** gusted to 60 mph in **St. Johns** and **Show Low**, a day after gusts reached 55 mph at the airport in **San Francisco, CA**. Another powerful storm reached the **Pacific Coast** on November 28-29, producing wind gusts in **western Oregon** to 82 mph in **Newport** and 78 mph in **Florence**. Farther south, gusts reached 55 mph in **Oroville, CA**, and 45 mph in **San Francisco**. A third storm reached the **West Coast** at week's end, bringing additional precipitation and gusty winds. In **Olympia, WA**, November precipitation totaled 13.34 inches (166 percent of normal), while **Astoria, OR**, netted 14.21 inches (141 percent). According to the California Department of Water Resources, the water equivalent of the high-elevation **Sierra Nevada** snow pack increased to 5 inches (99 percent of normal) on December 1, up from a trace on November 12.

A sprawling storm system produced widespread, drought-easing rainfall across **Hawaii** in late November. The heavy rain, which also caused some flash flooding, tapered to generally light showers thereafter. But during a 48-hour period from November 26-28, rainfall on the **Big Island** totaled 22.48 inches at **Kapapala Ranch**, 18.93 inches in **Pahala**, and 16.31 inches in **Glenwood**. Maximum reported 48-hour totals on other islands included 8.83 inches in **Kokee, Kauai**; 6.05 inches in **Maunawili, Oahu**; 6.61 inches in **Mahinahina, Maui**; and 5.33 inches in **Lanai City, Lanai**. Elsewhere on **Oahu**, **Honolulu** netted 3.24 inches on November 27, exceeding every monthly rainfall in Hawaiian capital since 4.90 inches fell during all of March 1997. High winds accompanied Hawaii's storm, including a peak gust to 43 mph in Lihue, Kauai. Meanwhile in **Alaska**, mostly dry weather accompanied temperatures that ranged from as much as 15°F below normal across the interior to 7°F above normal in northwestern portions of the State. **Fairbanks** closed the month with a precipitation total of 0.06 inch (8 percent of normal), their lowest November total since a trace was observed in 1953. Farther south, the low temperature in **Anchorage** fell to -6°F on December 1, ending their record-setting streak with low temperatures at or above 0°F at 682 days (January 18, 2000 - November 30, 2001).

November Precipitation Records

Record-High November Precipitation (Inches)

Location	Total	Normal	Previous Record/Year
Austin (Mabry), TX	10.00	2.37	7.99 in 1907
Sioux Falls, SD	4.76	1.09	3.66 in 1919
Lubbock, TX	3.45	0.75	2.67 in 1968
Salt Lake City, UT	3.34	1.29	2.96 in 1994

Wettest November (Inches) in Selected Locations Since...

Location	Total	Normal	Wettest November Since...
Memphis, TN	11.61	5.10	13.21 in 1934
Corpus Christi, TX	7.44	1.59	8.53 in 1947
Jackson, TN	10.31	4.79	11.21 in 1948
San Angelo, TX	3.46	1.08	3.55 in 1968
Abilene, TX	3.39	1.48	4.60 in 1968
Austin (Bergstrom), TX	10.51	2.89	12.49 in 1974
Stoneville, MS	11.74	5.31	12.98 in 1986

Record-Low November Precipitation (Inches)

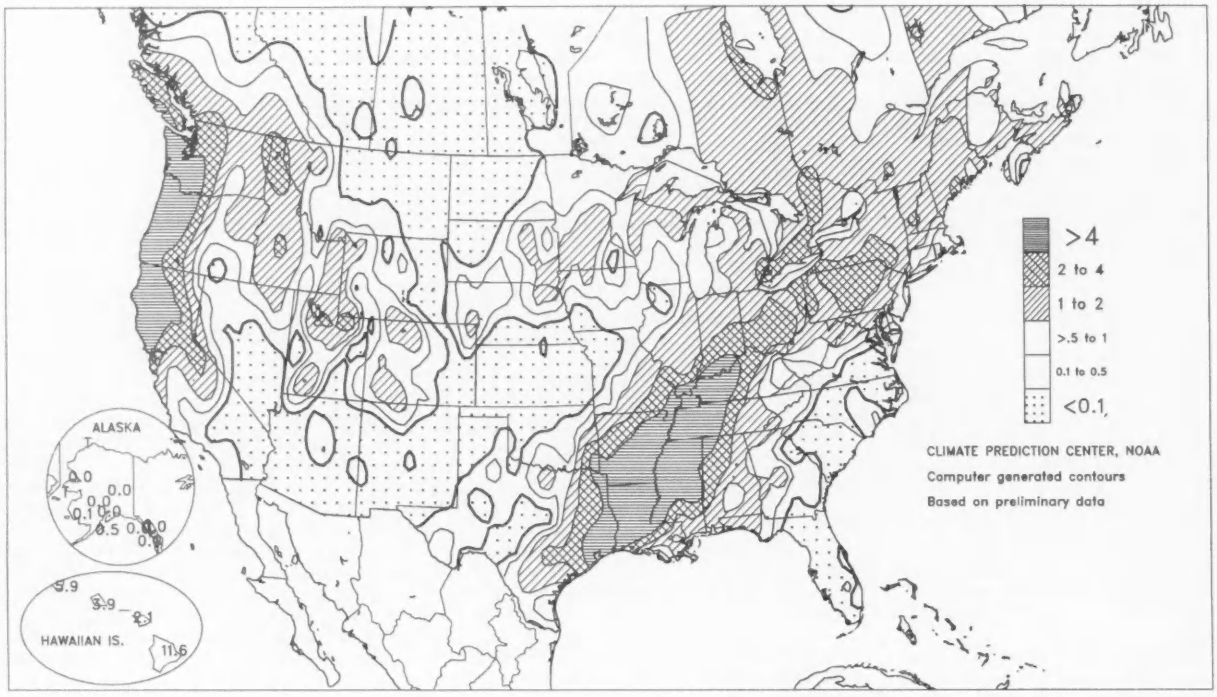
Location	Total	Normal	Previous Record/Year
Beckley, WV	0.66	2.99	0.95 in 1914 and 1946
Blacksburg, VA	0.41	2.83	0.49 in 1982
Greensboro, NC	0.34	2.97	0.35 in 1981
Providence, RI	0.31	4.43	0.31 in 1917
Norfolk, VA	0.08	2.85	0.20 in 1919

Driest November (Inches) in Selected Locations Since...

Location	Total	Normal	Driest November Since...
Richmond, VA	0.17	3.17	0.11 in 1890
Elkins, WV	0.86	3.33	0.73 in 1914
Fairbanks, AK	0.06	0.80	trace in 1953
Atlanta, GA	0.93	3.86	0.89 in 1960
Great Falls, MT	0.14	0.66	0.11 in 1969
Boston, MA	0.73	4.22	0.64 in 1976
Worcester, MA	0.70	4.32	0.67 in 1976
Philadelphia, PA	0.56	3.34	0.32 in 1976
Tampa, FL	0.10	1.77	0.01 in 1978
Washington, DC	0.55	3.12	0.29 in 1981
Baltimore, MD	1.01	3.32	0.31 in 1981
Havre, MT	0.04	0.38	0.03 in 1987

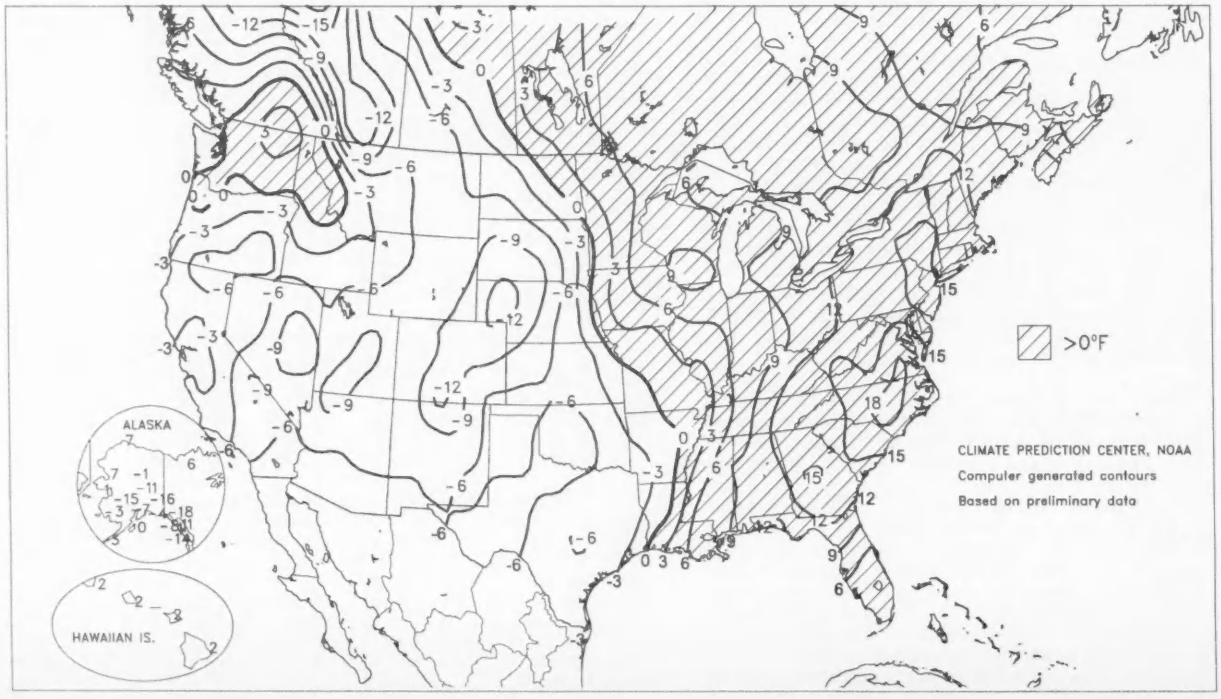
Total Precipitation (Inches)

NOV 25 - DEC 1, 2001



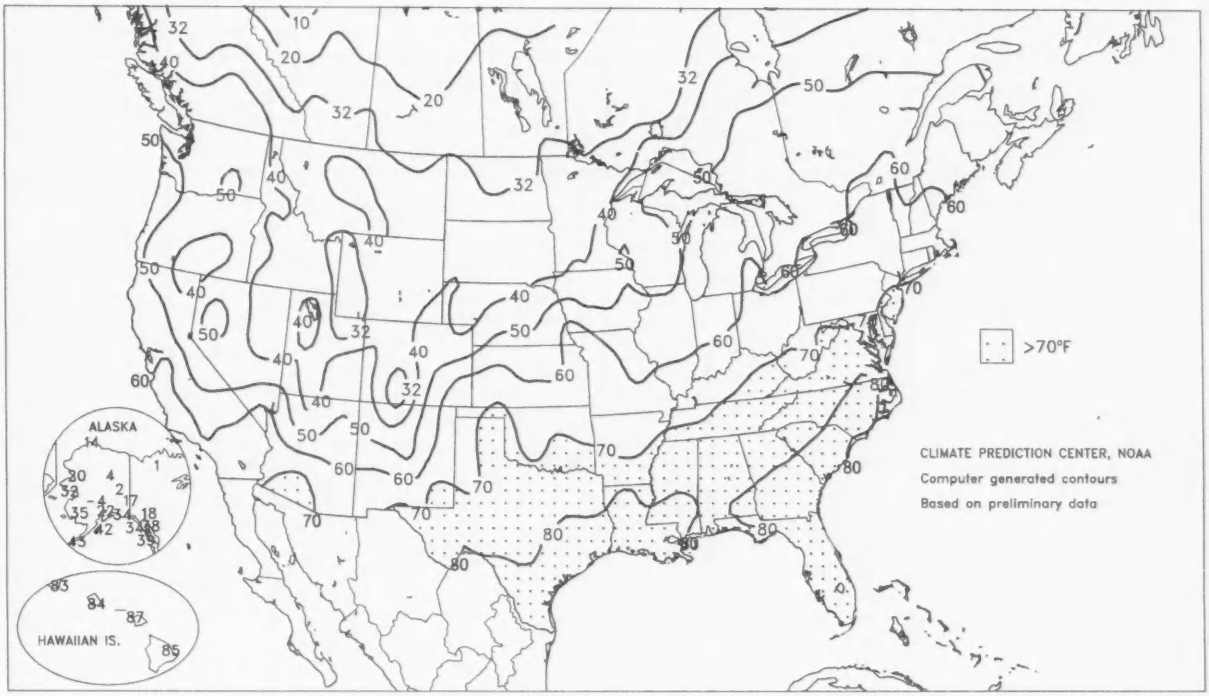
Departure of Average Temperature from Normal (°F)

NOV 25 - DEC 1, 2001



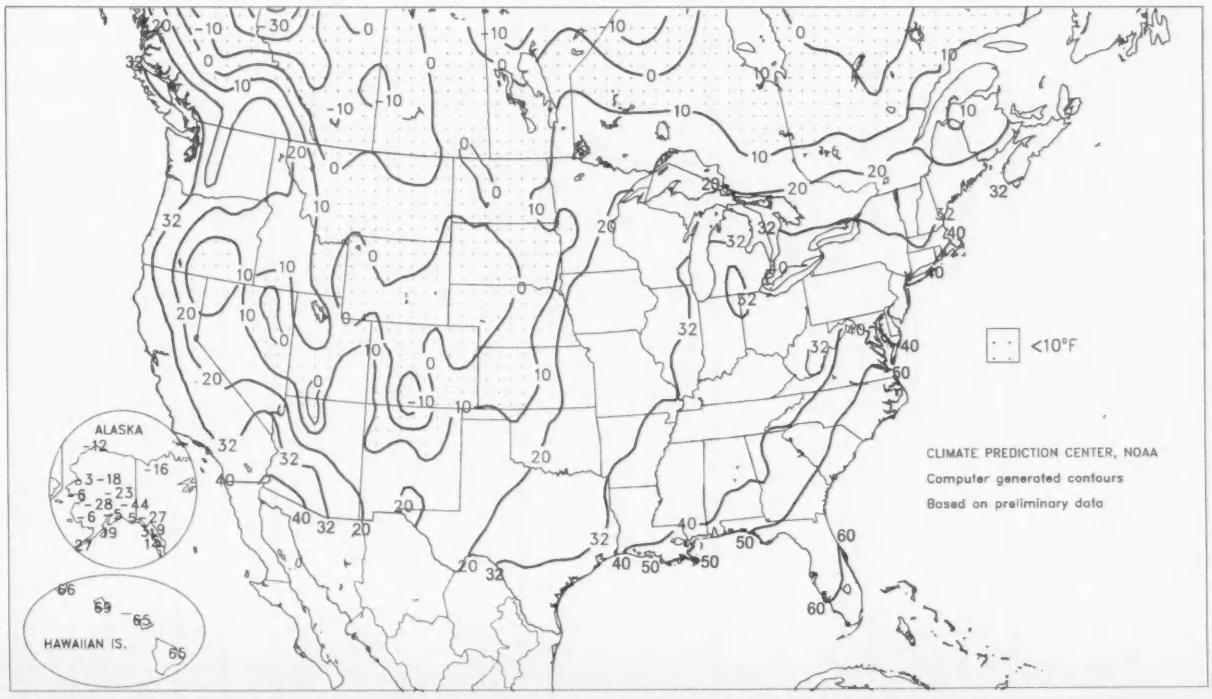
Extreme Maximum Temperature (°F)

NOV 25 - DEC 1, 2001



Extreme Minimum Temperature (°F)

NOV 25 - DEC 1, 2001



National Weather Data for Selected Cities

Weather Data for the Week Ending December 1, 2001

Data Provided by Climate Prediction Center (301-763-8000, Ext. 7503)

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	70	50	77	37	60	11	1.89	0.76	1.28	0.00	0	62.17	125	97	58	0	0	3	2
	HUNTSVILLE	67	48	74	35	57	9	1.63	0.35	1.15	0.00	0	57.34	111	97	69	0	0	3	1
	MOBILE	75	57	80	41	66	9	0.69	-0.42	0.56	0.00	0	51.86	88	97	66	0	0	3	1
	MONTGOMERY	74	51	80	37	62	9	1.23	0.12	0.79	0.01	6	44.40	92	10	59	0	0	3	1
AK	ANCHORAGE	18	5	22	-5	12	-6	0.00	-0.22	0.00	0.00	0	13.48	91	86	68	0	7	0	0
	BARROW	6	-5	14	-12	0	7	0.01	-0.04	0.01	0.01	100	4.99	115	87	82	0	7	1	0
	FAIRBANKS	-9	-19	2	-23	-14	-11	0.00	-0.19	0.00	0.00	0	8.21	82	76	73	0	7	0	0
	JUNEAU	23	13	38	9	18	-11	0.00	-0.98	0.00	0.00	0	54.73	109	53	42	0	7	0	0
	KODIAK	37	28	42	19	33	1	0.45	-0.94	0.22	0.00	0	67.48	111	90	82	0	5	4	0
	NOME	20	4	32	-6	12	0	0.01	-0.21	0.01	0.00	0	12.71	90	78	66	0	7	1	0
AZ	FLAGSTAFF	34	17	42	13	26	-7	0.42	-0.09	0.20	0.00	0	16.65	81	87	41	0	7	3	0
	PHOENIX	64	47	70	41	55	-3	0.00	-0.19	0.00	0.00	0	5.87	88	50	32	0	0	0	0
	TUCSON	61	39	70	29	50	-5	0.00	-0.18	0.00	0.00	0	7.24	66	49	29	0	2	0	0
	YUMA	65	48	68	42	57	-3	0.00	-0.07	0.00	0.00	0	3.31	121	47	37	0	0	0	0
AR	FORT SMITH	56	36	71	31	46	0	0.94	0.06	0.31	0.00	0	35.10	92	95	56	0	1	4	0
	LITTLE ROCK	56	37	68	32	46	-2	4.42	3.16	2.78	0.00	0	41.31	89	99	62	0	1	4	2
CA	BAKERSFIELD	56	41	59	34	48	-3	0.19	0.03	0.17	0.01	50	6.16	121	94	76	0	0	3	0
	FRESNO	54	40	58	35	47	-2	0.38	0.03	0.25	0.12	300	10.29	112	94	78	0	0	3	0
	LOS ANGELES	62	47	64	44	54	-5	0.30	-0.15	0.30	0.00	0	18.37	176	72	44	0	0	1	0
	REDDING	50	39	55	36	45	-3	2.72	1.39	1.33	1.33	782	28.35	101	92	76	0	0	4	2
	SACRAMENTO	54	43	57	35	48	-1	1.12	0.46	0.69	0.69	863	15.71	104	94	61	0	0	3	1
	SAN DIEGO	62	50	64	44	56	-4	0.12	-0.26	0.12	0.00	0	7.69	92	75	46	0	0	1	0
	SAN FRANCISCO	56	47	58	44	52	0	2.41	1.69	1.19	1.19	1322	18.87	113	90	72	0	0	4	2
	STOCKTON	55	40	57	33	47	-2	0.71	0.17	0.38	0.38	543	10.88	91	94	79	0	0	5	0
CO	ALAMOSA	28	-5	34	-15	11	-13	0.06	-0.03	0.06	0.00	0	9.75	136	87	67	0	7	1	0
	CO SPRINGS	36	14	48	3	26	-8	0.07	-0.04	0.04	0.00	0	14.86	94	83	41	0	7	2	0
	DENVER INTL	32	11	42	-2	21	***	0.13	***	0.10	0.00	***	15.20	***	85	58	0	7	2	0
	GRAND JUNCTION	37	24	44	16	31	-4	0.55	0.41	0.28	0.00	0	8.13	101	87	67	0	7	2	0
	PUEBLO	44	14	53	2	29	-7	0.05	-0.06	0.05	0.00	0	11.45	106	77	45	0	7	1	0
CT	BRIDGEPORT	60	47	65	44	54	13	0.47	-0.42	0.38	0.01	8	33.34	87	98	74	0	0	6	0
	HARTFORD	60	40	70	32	50	13	0.50	-0.46	0.36	0.01	8	31.66	78	99	72	0	1	7	0
DC	WASHINGTON	67	54	72	45	61	16	0.39	-0.35	0.38	0.00	0	28.52	80	98	62	0	0	2	0
DE	WILMINGTON	65	50	73	41	58	16	0.80	0.00	0.76	0.00	0	31.92	85	10	66	0	0	4	1
FL	DAYTONA BEACH	79	60	80	57	70	7	0.02	-0.58	0.01	0.00	0	57.96	128	10	59	0	0	2	0
	JACKSONVILLE	80	59	81	54	70	11	0.01	-0.53	0.01	0.00	0	46.11	95	10	58	0	0	1	0
	KEY WEST	80	71	81	69	76	2	0.05	-0.49	0.05	0.00	0	43.96	117	83	65	0	0	1	0
	MIAMI	81	68	82	66	75	3	0.01	-0.44	0.01	0.01	17	68.84	127	90	59	0	0	1	0
	ORLANDO	81	60	82	57	71	6	0.00	-0.54	0.00	0.00	0	54.85	119	10	57	0	0	0	0
	PENSACOLA	74	60	79	46	67	10	0.52	-0.33	0.51	0.01	8	45.12	78	89	67	0	1	2	1
	TALLAHASSEE	76	57	81	49	67	10	0.43	-0.62	0.28	0.01	7	62.77	103	99	68	0	0	4	0
	TAMPA	83	65	85	60	74	9	0.00	-0.46	0.00	0.00	0	38.88	93	97	56	0	0	0	0
	WEST PALM	80	69	81	64	75	5	0.05	-0.80	0.05	0.05	50	64.03	110	81	59	0	0	1	0
GA	ATHENS	74	52	77	43	63	13	0.06	-0.83	0.04	0.00	0	38.22	83	98	62	0	0	3	0
	ATLANTA	72	53	76	43	63	14	0.45	-0.51	0.28	0.00	0	36.57	79	97	61	0	0	4	0
	AUGUSTA	78	55	83	44	66	15	0.27	-0.36	0.01	0.01	11	32.71	79	98	67	0	0	5	0
	COLUMBUS	76	56	81	44	66	13	0.99	-0.01	0.59	0.01	7	36.80	80	96	52	0	0	5	1
	MACON	77	54	80	42	65	12	2.07	1.29	2.01	0.01	8	45.73	113	98	54	0	0	6	1
	SAVANNAH	80	59	83	52	69	13	0.00	-0.57	0.00	0.00	0	31.02	67	99	64	0	0	0	0
HI	HILO	81	69	85	65	75	2	11.58	8.19	6.32	0.43	98	99.43	85	94	82	0	0	6	3
	HONOLULU	83	73	84	69	78	2	3.89	3.11	3.60	0.00	0	8.44	46	88	77	0	0	3	1
	KAHULUI	84	69	87	65	77	2	2.12	1.43	1.23	0.01	11	6.59	37	90	76	0	0	4	2
	LIHUE	80	72	83	66	76	2	5.86	4.61	5.44	0.32	188	28.47	75	88	78	0	0	3	1
ID	BOISE	38	28	44	20	33	-2	0.47	0.12	0.17	0.00	0	7.38	68	86	73	0	5	3	0
	LEWISTON	43	32	51	28	38	0	0.38	0.10	0.24	0.00	0	10.30	91	88	75	0	4	4	0
	POCATELLO	32	20	36	7	26	-4	0.11	-0.16	0.06	0.06	150	6.10	55	88	76	0	7	4	0
IL	CHICAGO/O'HARE	47	37	52	30	42	8	0.62	-0.06	0.25	0.00	0	44.80	134	96	80	0	1	5	0
	MOLINE	45	34	52	28	40	7	0.25	-0.31	0.17	0.00	0	39.32	106	93	81	0	1	3	0
	PEORIA	47	36	57	32	42	7	0.46	-0.17	0.13	0.00	0	36.46	108	10	80	0	1	5	0
	ROCKFORD	45	36	50	28	40	8	0.31	-0.25	0.17	0.00	0	36.16	105	92	83	0	1	5	0
	SPRINGFIELD	48	35	56	32	41	4	0.63	0.01	0.32	0.00	0	32.94	101	93	80	0	2	4	0
IN	EVANSVILLE	57	39	63	36	48	7	3.96	3.05	1.56	0.00	0	42.81	108	93	71	0	0	5	3
	FORT WAYNE	50	38	57	31	44	8	1.49	0.80	0.74	0.00	0	41.16	129	99	86	0	1	5	1
	INDIANAPOLIS	54	39	59	36	46	8	1.80	1.00	0.64	0.00	0	38.94	106	95	76	0	0	5	2
	SOUTH BEND	49	39	56	33	44	8	1.12	0.32	0.69	0.00	0	37.58	105	92	79	0	0	5	1
IA	BURLINGTON	45	34	52	30	40	6	0.16	-0.35	0.08	0.00	0	37.69	110	94	75	0	3	3	0
	CEDAR RAPIDS	44	34	51	30	39	8	0.32	-0.12	0.24	0.00	0	34.71	108	94	78	0	3	4	0
	DES MOINES	41	32	49	28	36	4	0.33	-0.03	0.32	0.00	0	27.34	86	89	78	0	5	2	0
	DUBUQUE	42	33	49	29	38	8	0.33	-0.26	0.19	0.00	0	33.56	92	96	86	0	3	6	0
	SIOUX CITY	36	25	46	18	30	1	0.65	0.45	0.57	0.00	0	30.13	120	92	83	0	5	2	1
	WATERLOO	43	34	50	32	38	9	0.25	-0.12	0.18	0.00	0	34.09	105	96	87	0	3	4	0
KS	CONCORDIA	41	22	54	12	32	-4	0.00	-0.22	0.00	0.00	0	27.17	97	81	65	0	7	0	0
	DODGE CITY	47	17	70	7	32	-6	0.00	-0.17	0.00	0.00	0	18.31	88	80	32	0	7	0	0
	GOODLAND	40	12	52	3	26	-8	0.03	-0.10	0.03	0.00	0	16.42	92	85	55	0	7	1	0
	TOPEKA	46	28	63	23	37	0	0.00	-0.38	0.00	0.00	0	42.57	126	80	63	0	5	0	0

Based on 1961-90 normals

*** Not Available

Weather Data for the Week Ending December 1, 2001

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	46	25	63	19	36	-3	0.00	-0.33	0.00	0.00	0	24.40	87	79	54	0	7	0	0
KY	JACKSON	67	49	73	40	58	14	0.62	-0.42	0.31	0.00	0	32.59	72	93	54	0	0	4	0
	LEXINGTON	60	43	67	34	51	9	2.31	1.42	1.08	0.00	0	37.48	92	91	72	0	0	4	2
	LOUISVILLE	60	42	66	38	51	8	4.22	3.31	2.08	0.00	0	41.42	101	99	74	0	0	4	3
	PADUCAH	55	38	67	31	46	3	5.64	4.53	2.12	0.00	0	46.07	103	10	69	0	1	4	3
LA	BATON ROUGE	76	52	84	37	64	7	0.51	-0.64	0.45	0.00	0	58.11	105	98	53	0	0	2	0
	LAKE CHARLES	70	48	81	36	59	2	2.92	1.84	1.63	0.00	0	51.70	104	94	64	0	0	4	3
	NEW ORLEANS	74	56	81	42	65	7	0.67	-0.54	0.56	0.00	0	66.62	118	92	68	0	0	3	1
	SHREVEPORT	62	39	79	34	51	-2	3.91	2.87	1.59	0.00	0	53.26	126	96	62	0	0	4	3
ME	CARIBOU	41	26	53	8	34	10	1.10	0.36	0.51	0.01	9	28.31	85	97	78	0	5	7	1
	PORTLAND	50	39	66	30	45	11	0.81	-0.40	0.26	0.03	19	30.98	78	99	78	0	1	6	0
MD	BALTIMORE	65	49	73	37	57	15	0.83	0.03	0.79	0.01	9	32.61	87	99	73	0	0	3	1
MA	BOSTON	61	45	71	40	53	13	0.25	-0.76	0.09	0.00	0	28.57	76	96	67	0	0	5	0
	WORCESTER	56	41	64	32	49	15	0.71	-0.31	0.46	0.00	0	30.53	70	99	73	0	1	5	0
MI	ALPENA	43	35	57	29	39	8	1.06	0.54	0.32	0.00	0	25.69	96	96	83	0	2	6	0
	GRAND RAPIDS	47	39	56	35	43	10	0.92	0.14	0.44	0.00	0	38.17	115	97	82	0	0	5	0
	HOUGHTON LAKE	42	34	53	30	38	8	0.97	0.45	0.32	0.00	0	27.77	105	93	87	0	3	4	0
	LANSING	48	39	57	34	44	11	1.05	0.42	0.55	0.03	38	30.81	109	90	75	0	0	6	1
	MUSKEGON	47	39	54	36	43	8	0.73	-0.01	0.39	0.00	0	33.61	113	94	80	0	0	5	0
	TRAVERSE CITY	42	34	54	30	38	6	0.55	0.01	0.20	0.08	114	29.64	107	10	82	0	3	5	0
MN	DULUTH	30	24	40	20	27	6	0.16	-0.20	0.10	0.00	0	28.88	100	96	89	0	7	2	0
	INT'L FALLS	27	21	33	18	24	7	0.19	-0.03	0.09	0.01	33	27.32	116	91	81	0	7	4	0
	MINNEAPOLIS	35	30	43	27	33	7	0.48	0.18	0.20	0.00	0	33.23	122	92	81	0	7	5	0
	ROCHESTER	37	30	46	24	33	7	0.47	0.16	0.18	0.01	25	37.75	132	97	88	0	6	5	0
	ST. CLOUD	31	25	37	13	28	5	0.87	0.64	0.64	0.00	0	28.28	106	96	80	0	7	3	1
MS	JACKSON	71	47	79	36	59	7	5.10	3.83	3.34	0.00	0	58.79	118	96	63	0	0	3	3
	MERIDIAN	71	48	79	35	60	8	5.97	4.73	4.92	0.00	0	63.71	125	99	82	0	0	4	2
	TUPELO	65	44	73	36	55	7	5.63	4.33	3.76	0.01	5	61.10	122	99	83	0	0	5	3
MO	COLUMBIA	47	36	59	30	42	3	0.38	-0.27	0.26	0.00	0	39.17	107	89	71	0	4	4	0
	KANSAS CITY	46	29	65	24	37	0	0.00	-0.39	0.00	0.00	0	52.77	146	83	61	0	5	0	0
	SAINT LOUIS	51	38	60	32	44	3	1.45	0.65	0.69	0.00	0	31.87	92	87	72	0	2	4	1
	SPRINGFIELD	49	31	65	26	40	-1	0.74	-0.12	0.35	0.00	0	41.78	104	88	64	0	5	3	0
MT	BILLINGS	28	17	40	10	23	-7	0.26	0.07	0.17	0.00	0	10.86	76	86	72	0	7	2	0
	BUTTE	29	11	34	-3	20	-2	0.13	0.02	0.11	0.02	100	10.56	90	88	57	0	7	2	0
	GLASGOW	22	7	31	0	15	-7	0.07	0.01	0.03	0.00	0	12.68	120	88	79	0	7	3	0
	GREAT FALLS	32	19	42	8	25	-4	0.14	-0.03	0.10	0.00	0	9.89	69	81	53	0	7	2	0
	HAVRE	26	8	42	-1	17	-6	0.00	-0.10	0.00	0.00	0	6.89	65	89	82	0	7	0	0
	KALISPELL	33	25	37	17	29	2	0.24	-0.12	0.16	0.01	20	11.97	81	85	66	0	7	3	0
	MISSOULA	36	24	42	12	30	2	0.15	-0.07	0.12	0.01	33	12.17	99	82	70	0	7	3	0
NE	GRAND ISLAND	35	20	50	11	28	-4	0.16	-0.06	0.08	0.00	0	23.06	95	94	75	0	6	2	0
	LINCOLN	40	26	58	20	33	0	0.08	-0.17	0.04	0.00	0	31.89	116	83	68	0	6	2	0
	NORFOLK	34	21	47	13	28	-2	0.51	0.32	0.43	0.00	0	27.48	112	91	79	0	6	2	0
	NORTH PLATTE	32	9	47	-2	20	-10	0.08	-0.06	0.05	0.00	0	23.56	125	96	71	0	7	2	0
	OMAHA	40	28	59	22	34	1	0.14	-0.16	0.14	0.00	0	27.79	96	87	75	0	5	1	0
	SCOTTSBLUFF	29	13	42	-4	21	-10	0.08	-0.06	0.04	0.00	0	13.02	88	85	68	0	7	3	0
	VALENTINE	27	10	36	-6	18	-10	0.17	0.06	0.14	0.00	0	19.93	111	89	78	0	7	2	0
NV	ELY	29	5	34	-6	17	-13	0.22	0.08	0.22	0.00	0	6.08	64	86	69	0	7	1	0
	LAS VEGAS	55	38	67	34	47	-3	0.00	-0.11	0.00	0.00	0	3.86	103	53	37	0	0	0	0
	RENO	44	28	53	22	36	0	0.00	-0.22	0.00	0.00	0	2.57	39	77	55	0	6	0	0
	WINNEMUCCA	37	23	44	14	30	-4	0.44	0.22	0.29	0.02	67	3.99	54	89	71	0	7	5	0
NH	CONCORD	54	36	65	30	45	13	0.88	0.04	0.35	0.04	36	29.10	87	10	69	0	1	6	0
NJ	NEWARK	65	50	71	44	58	16	0.58	-0.33	0.51	0.00	0	29.23	72	94	69	0	0	2	1
NM	ALBUQUERQUE	43	27	52	21	35	-5	0.00	-0.09	0.00	0.00	0	6.30	75	65	38	0	6	0	0
NY	ALBANY	57	43	64	33	50	16	1.10	0.35	0.39	0.00	0	26.80	80	97	75	0	0	6	0
	BINGHAMTON	54	43	60	36	48	15	1.41	0.65	0.79	0.00	0	32.07	94	97	82	0	0	4	1
	BUFFALO	54	41	65	38	48	12	1.55	0.62	0.58	0.01	8	28.75	82	95	79	0	0	7	1
	ROCHESTER	55	42	65	38	49	13	1.40	0.71	0.47	0.00	0	27.54	94	94	81	0	0	6	0
	SYRACUSE	57	45	67	38	51	16	1.38	0.53	0.40	0.00	0	32.18	90	94	73	0	0	6	0
NC	ASHEVILLE	70	44	72	38	57	13	0.32	-0.51	0.16	0.00	0	32.17	73	97	71	0	0	3	0
	CHARLOTTE	73	53	77	47	63	15	0.05	-0.72	0.05	0.00	0	24.28	61	10	64	0	0	1	0
	GREENSBORO	72	53	77	46	63	17	0.12	-0.58	0.10	0.00	0	27.74	70	10	64	0	0	3	0
	HATTERAS	71	62	73	55	66	13	0.18	-0.93	0.16	0.00	0	27.09	52	95	77	0	0	2	0
	RALEIGH	76	54	81	46	65	18	0.15	-0.56	0.12	0.01	10	32.99	86	98	70	0	0	4	0
	WILMINGTON	78	60	81	54	69	16	0.08	-0.71	0.07	0.00	0	36.70	72	98	63	0	0	2	0
ND	BISMARCK	24	12	33	0	18	-4	0.04	-0.07	0.02	0.00	0	21.24	142	85	78	0	7	3	0
	DICKINSON	23	10	42	3	17	-6	0.00	-0.08	0.00	0.00	0	18.39	117	92	73	0	7	0	0
	FARGO	27	20	33	17	24	4	0.04	-0.10	0.02	0.00	0	19.22	102	93	79	0	7	2	0
	GRAND FORKS	25	17	32	8	21	2	0.07	-0.07	0.06	0.00	0	21.07	119	94	77	0	7	2	0
	JAMESTOWN	24	16	33	11	20	-1	0.06	-0.05	0.06	0.00	0	20.17	123	95	77	0	7	1	0
	WILLISTON	23	10	36	6	17	-3	0.05	-0.06	0.03	0.00	0	13.15	100	87	75	0	7	2	0
OH	AKRON-CANTON	54	42	61	36	48	11	1.76	1.02	0.59	0.00	0	30.53	90	96	85	0	0	5	1
	CINCINNATI	57	39	64	34	48	8	2.72	1.91	0.96	0.00	0	42.52	111	90	79	0	0	5	3
	CLEVELAND	55	44	62	40	49	11	1.62	0.85	0.47	0.00	0	31.87	95	96	84	0	0	5	0
	COLUMBUS	57	43	63	36	50	12	2.85	2.07	1.48	0.00	0	33.93	96	93	78	0	0	6	1
	DAYTON	54	39	60	34	47	9	2.35	1.61	0.82	0.00	0	38.63	114	96	78	0	0	5	3
	MANSFIELD	53	40	60	34	46	10	1.68	0.83	0.60	0.00	0	31.14	85	97	75	0	0	5	2

Based on 1961-90 normals

*** Not Available

Weather Data for the Week Ending December 1, 2001

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	52	41	61	35	47	12	1.51	0.79	0.92	0.00	0	31.95	106	95	79	0	0	4	1
	YOUNGSTOWN	56	42	62	36	49	13	2.15	1.41	0.95	0.00	0	27.40	79	93	77	0	0	5	2
OK	OKLAHOMA CITY	48	28	70	21	38	-7	0.13	-0.24	0.07	0.00	0	28.00	87	85	53	0	4	2	0
	TULSA	51	31	69	27	41	-4	0.12	-0.53	0.10	0.00	0	26.93	70	85	61	0	5	3	0
OR	ASTORIA	50	40	54	37	45	0	6.16	3.63	2.01	1.19	350	50.77	90	94	83	0	0	7	3
	BURNS	33	11	37	1	22	-7	0.55	0.25	0.36	0.08	200	7.40	84	91	80	0	7	4	0
	EUGENE	48	39	51	34	44	1	4.47	2.33	1.51	1.20	429	23.14	56	93	86	0	0	7	3
	MEDFORD	46	34	51	30	40	-1	1.88	1.06	0.79	0.54	491	11.62	74	97	64	0	3	6	2
	PENDLETON	46	34	55	27	40	2	0.16	-0.25	0.12	0.00	0	9.76	93	78	61	0	3	2	0
	PORTLAND	48	40	52	37	44	1	4.00	2.59	1.34	1.05	525	25.31	83	95	80	0	0	6	3
	SALEM	48	40	51	33	44	2	4.79	3.16	1.45	1.45	659	27.46	84	95	85	0	0	7	3
PA	ALLENTOWN	61	44	67	34	53	15	0.89	-0.03	0.65	0.00	0	34.10	85	99	72	0	0	5	1
	ERIE	56	44	65	39	50	12	1.47	0.54	0.46	0.00	0	30.00	79	89	82	0	0	5	0
	MIDDLETOWN	60	46	67	38	53	13	1.33	0.51	1.12	0.00	0	23.90	64	10	77	0	0	4	1
	PHILADELPHIA	66	52	72	44	59	17	0.40	-0.42	0.39	0.00	0	28.94	76	94	66	0	0	2	0
	PITTSBURGH	58	43	64	39	51	13	2.39	1.70	0.78	0.00	0	33.35	98	94	68	0	0	5	3
	WILKES-BARRE	58	43	65	33	51	14	1.35	0.66	0.78	0.00	0	26.39	78	97	70	0	0	4	1
	WILLIAMSPORT	57	44	65	37	50	13	2.54	1.71	1.51	0.00	0	33.48	89	95	75	0	0	4	2
RI	PROVIDENCE	62	46	71	41	54	15	0.08	-0.99	0.08	0.00	0	37.47	91	99	73	0	0	1	0
SC	BEAUFORT	79	60	82	54	70	14	0.00	-0.61	0.00	0.00	0	43.13	89	10	66	0	0	0	0
	CHARLESTON	79	59	81	54	69	14	0.12	-0.50	0.12	0.00	0	38.33	79	10	69	0	0	1	0
	COLUMBIA	78	58	82	47	68	17	0.26	-0.45	0.24	0.01	10	26.84	58	97	61	0	0	3	0
	GREENVILLE	73	50	75	42	61	13	0.17	-0.70	0.16	0.00	0	38.17	81	10	61	0	0	2	0
SD	ABERDEEN	25	13	35	6	19	-4	0.99	0.88	0.68	0.00	0	22.59	124	90	84	0	7	4	1
	HURON	26	15	36	5	21	-5	0.23	0.11	0.23	0.00	0	25.96	132	92	81	0	7	1	0
	RAPID CITY	27	11	37	-4	19	-11	0.06	-0.05	0.06	0.00	0	14.45	89	86	68	0	7	1	0
	SIOUX FALLS	29	20	37	10	25	-1	1.43	1.22	1.31	0.00	0	29.98	129	93	86	0	7	4	1
TN	BRISTOL	70	42	77	33	56	13	0.16	-0.58	0.14	0.00	0	38.36	102	95	47	0	0	2	0
	CHATTANOOGA	70	48	76	37	59	13	1.35	0.17	0.87	0.00	0	49.94	103	92	56	0	0	3	1
	KNOXVILLE	71	47	77	38	59	14	0.94	-0.04	0.47	0.00	0	37.92	89	93	47	0	0	3	0
	MEMPHIS	60	42	73	37	51	3	10.07	8.73	5.86	0.00	0	55.80	120	93	63	0	0	4	3
	NASHVILLE	65	45	73	36	55	9	4.11	3.04	3.46	0.00	0	45.61	106	97	68	0	0	4	2
TX	ABILENE	56	34	74	23	45	-5	0.42	0.15	0.31	0.00	0	20.87	89	76	47	0	3	2	0
	AMARILLO	49	26	69	15	38	-3	0.17	0.06	0.16	0.00	0	18.48	97	73	35	0	4	2	0
	AUSTIN	63	37	81	30	50	-7	1.99	1.52	1.85	0.04	57	37.48	125	97	54	0	3	4	1
	BEAUMONT	68	47	80	35	57	-1	4.15	3.00	2.63	0.00	0	65.77	125	10	69	0	0	4	3
	BROWNSVILLE	75	53	87	37	64	-2	0.34	0.04	0.32	0.32	800	16.18	64	90	59	0	0	3	0
	CORPUS CHRISTI	67	50	82	37	59	-3	0.26	-0.04	0.12	0.05	125	37.90	131	96	76	0	0	4	0
	DEL RIO	63	40	79	32	51	-5	0.20	0.06	0.18	0.02	100	9.32	53	83	55	0	2	2	0
	EL PASO	55	33	72	23	44	-4	0.12	0.01	0.12	0.00	0	4.20	51	66	32	0	4	1	0
	FORT WORTH	60	36	75	27	48	-4	0.52	0.07	0.29	0.00	0	34.93	109	92	47	0	2	3	0
	GALVESTON	67	52	79	36	59	-2	4.20	3.36	2.70	0.00	0	56.15	144	96	74	0	0	3	2
	HOUSTON	65	42	82	33	54	-3	2.51	1.67	1.83	0.01	9	65.14	152	98	77	0	0	5	1
	LUBBOCK	50	30	68	18	40	-5	0.37	0.25	0.19	0.00	0	15.44	85	76	45	0	3	2	0
	MIDLAND	52	28	71	11	40	-8	0.14	0.03	0.09	0.00	0	9.47	66	79	49	0	5	2	0
	SAN ANGELO	57	34	74	25	46	-5	0.44	0.25	0.37	0.00	0	18.51	94	80	43	0	3	2	0
	SAN ANTONIO	64	40	79	30	52	-5	1.15	0.65	1.02	0.11	183	33.46	113	91	53	0	3	3	1
	VICTORIA	66	44	83	33	55	-4	0.44	-0.07	0.20	0.12	171	39.53	112	95	65	0	0	4	0
	WACO	62	38	78	29	50	-3	0.35	-0.14	0.25	0.00	0	31.67	105	89	70	0	2	3	0
	WICHITA FALLS	53	31	76	23	42	-6	0.32	0.02	0.22	0.00	0	16.37	59	80	42	0	4	2	0
UT	SALT LAKE CITY	35	22	41	15	29	-7	0.98	0.67	0.77	0.00	0	14.15	95	92	74	0	7	4	1
VT	BURLINGTON	53	39	67	30	46	15	0.77	0.08	0.46	0.00	0	22.04	69	96	75	0	2	5	0
VA	LYNCHBURG	68	46	74	42	57	13	0.09	-0.63	0.04	0.01	9	29.33	78	99	69	0	0	6	0
	NORFOLK	73	57	79	52	65	16	0.00	-0.68	0.00	0.00	0	31.53	76	96	67	0	0	0	0
	RICHMOND	71	57	75	53	64	18	0.01	-0.71	0.01	0.00	0	29.83	75	97	73	0	0	1	0
	ROANOKE	69	49	76	44	59	16	0.39	-0.31	0.33	0.00	0	22.64	59	96	67	0	0	4	0
	WASH/DULLES	66	50	72	37	58	17	0.61	-0.16	0.56	0.01	9	35.47	96	99	79	0	0	5	1
WA	OLYMPIA	45	36	47	32	41	1	4.98	2.97	1.94	1.59	612	40.35	94	97	90	0	2	7	3
	QUILLAYUTE	46	36	49	33	41	-1	6.22	2.60	1.92	1.92	384	83.74	93	98	88	0	0	7	3
	SEATTLE-TACOMA	46	39	51	34	42	-1	2.01	0.55	0.79	0.39	195	32.07	102	92	81	0	0	6	1
	SPOKANE	36	28	40	24	32	1	1.10	0.53	0.34	0.14	175	11.83	84	97	77	0	6	5	0
	YAKIMA	41	25	47	17	33	-1	1.18	0.88	0.96	0.12	300	5.88	89	96	84	0	7	5	1
WV	BECKLEY	67	47	72	35	57	18	0.40	-0.32	0.20	0.00	0	33.56	89	93	63	0	0	2	0
	CHARLESTON	67	43	74	35	55	12	0.66	-0.19	0.51	0.00	0	39.36	100	98	58	0	0	3	1
	ELKINS	67	36	73	31	51	14	0.33	-0.47	0.32	0.00	0	37.41	90	10	53	0	3	2	0
	HUNTINGTON	63	43	70	35	53	11	0.92	0.12	0.49	0.00	0	32.87	86	98	61	0	0	5	0
WI	EAU CLAIRE	37	31	50	28	34	9	0.40	0.10	0.32	0.00	0	34.91	114	97	77	0	7	3	0
	GREEN BAY	41	32	50	29	37	9	0.69	0.23	0.28	0.01	17	26.49	97	96	85	0	4	7	0
	LA CROSSE	40	34	49	27	37	8	0.68	0.32	0.24	0.01	20	31.40	107	97	76	0	1	6	0
	MADISON	43	35	48	32	39	10	0.38	-0.10	0.23	0.00	0	37.40	128	96	80	0	1	6	0
	MILWAUKEE	46	37	50	33	41	9	0.58	-0.01	0.24	0.01	13	35.72	116	94	80	0	0	7	0
WY	CASPER	29	16	36	1	22	-6	0.21	0.04	0.10	0.00	0	6.72	57	80	70	0	7	3	0
	CHEYENNE	30	14	41	0	22	-9	0.18	0.07	0.13	0.00	0	13.13	94	76	60	0	7	2	0
	LANDER	28	11	40	1	20	-6	0.33	0.17	0.20	0.00	0	5.39	43	84	69	0	7	3	0
	SHERIDAN	28	12	37	1	20	-7	0.18	0.01	0.16	0.00	0	10.87	79	87	79	0	7	2	0

Based on 1961-90 normals *** Not Available

NOTE: These data are preliminary and subject to change. In the past, precipitation totals from a number of stations were incomplete.

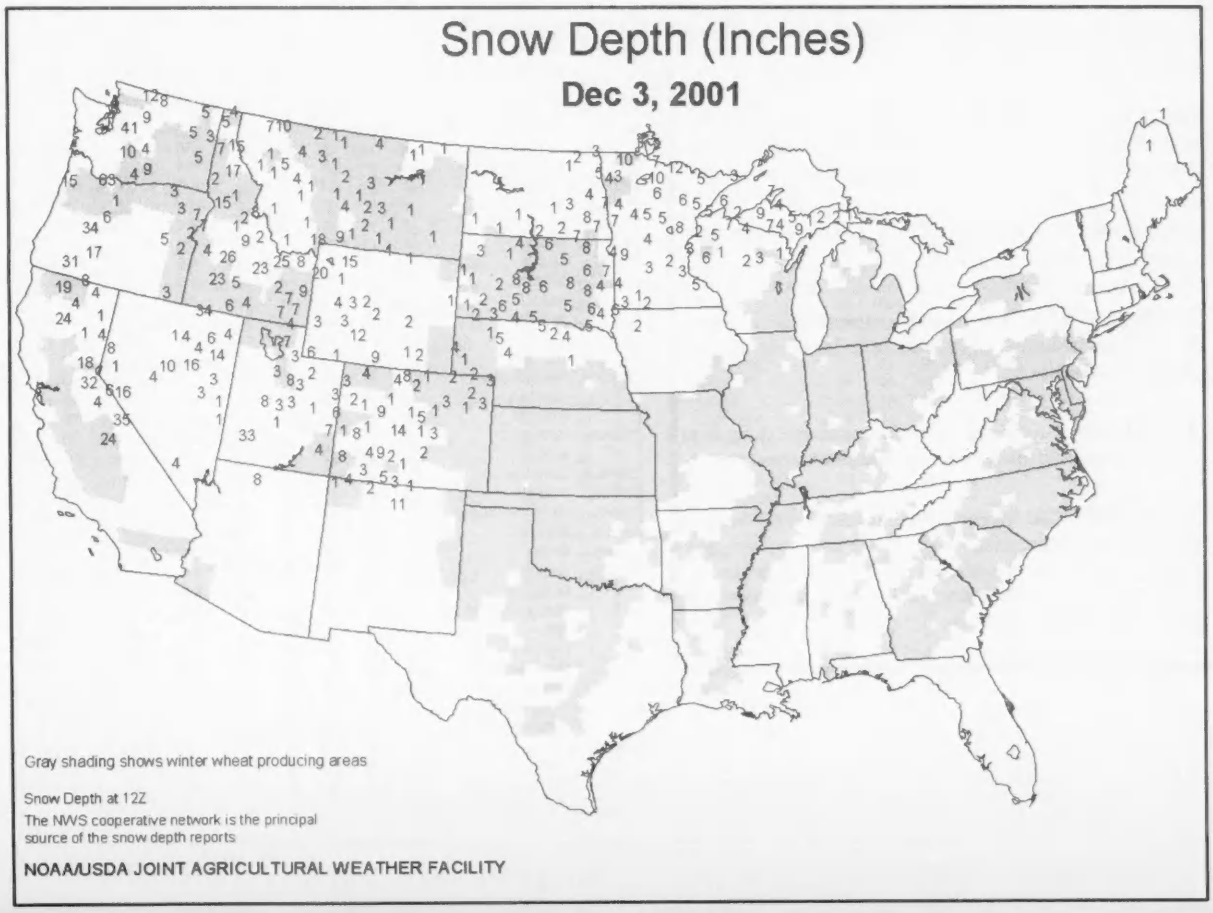
National Agricultural Summary

November 26 - December 2, 2001

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

A band of heavy precipitation prevented fieldwork along a line extending from the western Gulf Coast, through the lower Mississippi Valley, and into the Ohio Valley and Northeast. Many low-lying areas along rivers and streams were flooded, and poorly drained fields had standing water for much of the week, especially in the lower Mississippi Valley. Rain also drenched coastal areas of the Pacific Coast States, while snow accumulations increased in the Cascade and Sierra ranges, Great Basin, and Rocky Mountains. Light precipitation boosted moisture supplies for winter wheat development in parts of the Great Plains and scattered areas along the Atlantic Coastal Plain, but soil moisture reserves remained short in most areas. Below-normal temperatures limited winter wheat growth in the Great Plains, but near-record warmth and abundant moisture supplies promoted rapid growth of soft red winter wheat fields in the Corn Belt. Early-week snow storms provided insulation that protected winter wheat fields on the northern High Plains from brief periods of single-digit and sub-zero temperatures. Scattered light showers barely interrupted harvest activities and other fieldwork on the southern High Plains and along the Atlantic Coastal Plain. Dry weather also supported field and orchard work in Florida.


Snow Depth (Inches)
Dec 3, 2001
Gray shading shows winter wheat producing areas
Snow Depth at 12Z
The NWS cooperative network is the principal source of the snow depth reports
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

International Weather and Crop Summary

November 25 - December 1, 2001

International Weather and Crop Highlights and Summaries provided by USDA/WAOB

HIGHLIGHTS

EUROPE: Continued cold weather in southeastern Europe caused winter grains to slip into dormancy.

FSU-WESTERN: A mixture of rain and snow favored dormant winter grains in Ukraine and Russia.

NORTHWESTERN AFRICA: Generally dry weather continued to slow planting in Morocco, while light showers benefited emerging grains in eastern Algeria and Tunisia.

MIDDLE EAST: Showers lingered over Turkey, providing timely moisture for winter wheat establishment but worsening local flooding in the southwest.

SOUTH AFRICA: Widespread showers maintained adequate to excessive moisture levels for emerging corn and other summer crops.

EASTERN ASIA: In the North China Plain, seasonably colder weather began to harden winter wheat for dormancy, while showers returned to central and southern China.

SOUTH ASIA: Warm, dry weather favored summer crop harvesting and winter crop planting.

SOUTHEAST ASIA: The seasonal southward shift of tropical showers brought beneficial rains to Java, Indonesia, and dry weather to Indochina.

AUSTRALIA: Continuing showers increased long-term moisture reserves in major cotton and sorghum areas.

SOUTH AMERICA: In central Argentina, mostly dry weather favored filling to maturing winter wheat and summer crop planting. Across the major crop areas of southern Brazil, widespread showers maintained adequate to abundant soil moisture for germinating crops.

November 2001

MONTHLY DATA FROM SELECTED FOREIGN CITIES CLIMATE PREDICTION CENTER-NCEP-NWS-NOAA

**** DATA NOT AVAILABLE*

COUNTRY	CITY	TEMPERATURE (C)						PRECIPITATION (MM)	
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DPART F/NRM	TOTAL	DPART F/NRM
NORWAY	OSLO	3	-2	12	-7	1	1.9	31	-59
SWEDEN	STOCKHOLM	5	1	13	-6	3	0.3	0	-53
FINLAN	HELSINKI	2	-2	9	-9	0	-0.2	60	-12
UKINGD	ABERDEEN	9	4	15	1	7	1.7	44	-32
	MANCHESTER	10	5	15	-2	8	1.4	60	-18
	NOTTINGHAM	10	4	14	-1	7	0.2	28	-31
	BOURNEMOUTH	12	4	14	-4	8	0.3	21	-63
IRELAN	DUBLIN	11	6	16	0	8	1.1	39	-25
ICELAN	REYKJAVIK	4	0	12	-8	2	1.0	61	-11
DENMAR	COPENHAGEN	7	2	13	-4	5	-0.6	40	-9
LUXEMB	LUXEMBOURG	7	2	13	-3	5	0.7	75	-4
SWITZE	ZURICH	5	1	11	-2	3	-0.9	99	15
	GENEVA	7	2	12	-3	5	-0.5	40	-52
FRANCE	PARIS/AEROPRT	9	4	14	-2	7	***	53	***
	STRASBOURG	8	2	14	-3	5	-0.3	52	7
	BOURGES	9	2	14	-5	5	-1.1	43	-15
	BORDEAUX	11	5	17	-1	8	-0.7	46	-47
	TOULOUSE	11	4	19	-2	8	-1.1	29	-19
	MARSEILLE	14	6	19	-1	10	-0.5	25	-33
SPAIN	VALLADOLID	11	2	18	-3	6	-1.2	5	-47
	MADRID	13	2	20	-6	7	-1.8	12	-54
	SEVILLE	19	9	28	3	14	-1.0	88	18
PORTUG	LISBON	16	10	24	5	13	-0.9	8	-91
GERMAN	HAMBURG	8	3	12	-5	5	0.3	65	-6
	BERLIN	7	2	12	-5	5	-0.3	46	-3
	DUSSELDORF	9	4	13	-5	6	0.0	84	21
	LEIPZIG	7	3	11	-4	5	0.2	36	-1
	DRESDEN	6	2	11	-4	4	-0.5	72	30
	STUTTGART	6	1	13	-6	4	-0.6	80	33
	NURNBERG	6	0	13	-7	3	-0.9	73	29
	AUGSBURG	5	0	12	-7	2	-1.2	89	39
AUSTRI	VIENNA	7	1	14	-6	4	-0.5	35	-7
	INNSBRUCK	5	-1	14	-7	2	-1.1	96	37
CZECHR	PRAGUE	5	0	12	-7	3	-0.1	33	2
POLAND	WARSAW	4	0	11	-7	2	-0.9	42	1
	LODZ	4	0	10	-6	2	-0.1	43	4
	KATOWICE	4	-1	10	-8	2	-0.6	59	18
	PRZEMYSL	4	0	11	-8	2	-1.4	11	-29
HUNGAR	BUDAPEST	6	1	14	-3	4	-1.4	31	-22
YUGOSL	BELGRADE	8	3	20	-2	6	-1.5	68	13
ROMANI	BUCHAREST	9	-1	21	-9	4	-2.1	27	-20
BULGAR	SOFIA	9	1	22	-5	5	0.2	25	-25
ITALY	MILAN	12	4	19	-3	8	0.9	36	-59
	VERONA	9	2	17	-4	6	-1.0	60	-13
	VENICE	12	4	19	-2	8	0.3	43	-41
	GENOA	16	11	21	4	13	0.7	37	-122
	ROME	18	8	23	-1	13	0.4	100	-7
	NAPLES	18	9	24	-1	13	1.5	121	-33
GREECE	THESSALONIKA	14	7	22	-3	10	-0.4	9	-49
	LARISSA	16	4	23	-6	10	-0.9	15	-46
	ATHENS	18	12	24	5	15	-0.6	162	106
TURKEY	ISTANBUL	14	9	23	2	12	0.0	164	76
	ANKARA	10	1	19	-9	6	-0.4	80	55
CYPRUS	LARNACA	22	13	27	6	18	-0.1	22	-17
ESTONI	TALLINN	3	-1	11	-7	1	0.1	87	23
RUSSIA	ST.PETERSBURG	1	-3	9	-14	-1	-1.0	87	35
LITHUA	KAUNAS	4	0	10	-7	2	-0.3	75	24
BELARU	MINSK	3	0	9	-10	1	0.5	55	4
RUSSIA	KAZAN	0	-4	10	-20	-2	1.3	51	7
	MOSCOW	1	-2	10	-10	-1	0.6	65	10
	YEKATERINBURG	-2	-7	6	-19	-5	1.0	36	7
	OMSK	-1	-5	10	-26	-3	4.3	35	8
	KRASNOYARSK	1	-5	13	-24	-2	***	30	***
	NOVOSIBIRSK	-1	-5	10	-24	-3	6.8	25	-3
	BARNAUL	1	-3	14	-25	-1	5.5	14	-21
	KHABAROVSK	-2	-10	9	-21	-6	1.8	8	-13
	VLADIVOSTOK	5	-1	13	-9	2	3.4	6	-25
UKRAIN	KIEV	5	0	14	-9	2	0.3	71	23
	LVOV	3	-1	10	-9	1	-1.3	74	30
	KIROVOGRAD	5	0	20	-8	3	0.7	61	26

Based on Preliminary Reports

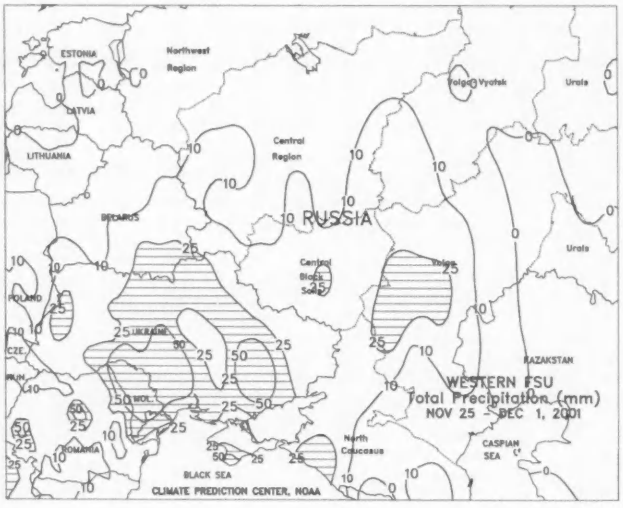
November 2001

COUNTRY	CITY	TEMPERATURE (C) AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DPART F/NRM	PRECIPITATION (MM) TOTAL	DPART F/NRM
	ODESSA	8	3	22	-4	6	-0.3	74	35
	YALTA	12	7	25	-1	9	0.0	163	102
RUSSIA	VORONEZH	3	0	14	-12	2	***	57	***
	SARATOV	2	-1	10	-8	1	2.5	90	50
	VOLGOGRAD	5	-1	13	-11	2	2.3	44	10
UKRAIN	ZDANOV	7	2	18	-8	4	2.1	55	28
RUSSIA	ASTRAKHAN	9	3	19	-8	6	2.6	29	12
	KRASNODAR	10	4	21	-3	7	1.2	108	48
KAZAKS	ATBASAR	0	-5	11	-27	-3	4.5	45	23
RUSSIA	ORENBURG	1	-3	11	-17	-1	2.1	44	6
KAZAKS	KARAGANDA	2	-5	14	-23	-1	3.7	11	-16
GEORGI	TBILISI	14	5	21	-7	9	0.9	0	-32
UZBEKI	TASHKENT	16	7	26	0	11	3.5	31	-13
TURKME	ASHKHABAD	16	6	32	-2	11	1.4	16	-5
SYRIA	DAMASCUS	20	4	27	-11	12	-0.5	0	-25
ISRAEL	BEN-GURION	24	14	30	8	19	1.4	38	-31
INDIA	AMRITSAR	28	10	33	6	19	0.8	0	-7
	NEW DELHI	29	13	36	9	21	0.3	1	-5
	AHMEDABAD	34	17	38	12	25	0.4	0	-11
	INDORE	30	14	34	9	22	0.2	0	-21
	CALCUTTA	30	21	34	17	26	2.1	16	0
	VERAVAL	34	21	36	20	28	1.6	0	-26
	BOMBAY	35	22	37	20	28	1.7	0	-7
	POONA	31	14	33	10	22	-0.1	23	0
	BEGAMPET	31	19	32	14	25	1.7	2	-21
	KAKINADA	30	24	33	21	27	1.6	96	-11
	MADRAS	30	24	32	22	27	0.7	261	-79
	MANGALORE	33	24	34	22	28	0.9	107	36
N KORE	NAMPO	10	2	16	-5	6	0.8	3	-25
S KORE	SEOUL	11	3	16	-3	7	1.1	7	-29
JAPAN	SAPPORO	9	2	16	-5	5	1.0	85	-14
	NAGOYA	17	7	22	2	12	0.5	55	-15
	TOKYO	17	10	22	6	13	0.6	125	35
	YOKOHAMA	16	9	23	5	13	0.6	142	37
	MAIZURU	16	7	22	3	11	0.1	240	99
	OSAKA	18	10	23	6	14	0.8	41	-25
THAILA	PHITSANULOK	31	19	35	14	25	-2.0	6	-27
	BANGKOK	32	23	36	19	27	0.0	37	-15
MALAYS	KUALA LUMPUR	32	24	35	23	28	2.0	221	-55
VIETNA	HANOI	26	18	32	14	22	0.5	22	-21
CHINA	HARBIN	2	-6	11	-15	-2	5.1	4	-4
	HAMI	10	-3	16	-9	4	3.6	2	1
	LANCHOW	11	-1	18	-5	5	3.5	2	-3
	BEIJING	11	0	18	-7	6	1.2	21	15
	TIENTSIN	11	1	19	-4	6	0.7	16	6
	LHASA	13	-3	18	-6	5	1.8	0	-2
	KUNMING	17	8	23	3	12	0.9	34	-6
	CHENGCHOW	15	4	21	-3	10	2.0	0	-25
	YEHCHANG	18	10	25	5	14	1.6	22	-25
	HANKOW	18	10	22	7	14	2.9	54	-1
	NEIJIANG	17	13	22	9	15	1.2	32	-4
	CHIHKIANG	19	9	23	4	14	1.3	51	-17
	NANJING	17	7	20	2	12	0.8	38	-18
	HANGZHOU	17	9	22	5	13	1.3	42	-17
	NANCHANG	18	10	22	6	14	1.0	104	50
	TAIPEI	23	19	29	14	21	0.8	17	-47
	CANTON	26	15	31	9	20	1.2	20	-22
	NANNING	25	13	31	6	19	0.0	32	-14
CANARY	LAS PALMAS	23	19	29	15	21	0.9	99	77
MOROCC	CASABLANCA	21	13	31	7	17	1.3	22	-50
	MARRAKECH	22	12	32	2	17	1.0	6	-32
ALGERI	ALGER	18	9	25	2	14	-1.2	50	-55
	BATNA	15	5	24	0	10	0.3	25	-11
TUNISI	TUNIS	21	14	25	10	17	1.5	57	1
NIGER	NIAMEY	37	19	39	16	28	0.2	0	0
MALI	TIMBUKTU	35	20	37	16	27	1.5	0	0
	BAMAKO	35	21	37	15	28	1.1	0	-3
MAURIT	NOUAKCHOTT	31	21	38	17	26	0.3	3	-1
SENEGA	DAKAR	31	25	35	3	28	2.6	5	5
CHAGOS	DIEGO GARCIA	30	26	32	24	28	0.8	203	-8
LIBYA	TRIPOLI	24	15	35	9	19	2.0	66	20
	BENGHAZI	23	16	28	10	19	1.1	29	-6
EGYPT	CAIRO	24	15	29	10	20	0.8	0	-4
	ASWAN	29	14	34	10	21	-0.2	0	0
ETHIOP	ADDIS ABABA	***	***	24	4	***	***	***	***
KENYA	NAIROBI	24	15	27	13	19	-0.1	209	88
TANZAN	DAR ES SALAAM	***	***	33	20	***	***	***	***
GABON	LIBREVILLE	29	24	30	22	27	0.8	195	-328
TOGO	LOME	32	25	33	23	29	1.5	0	-22
BURKIN	OUAGADOUGOU	37	21	38	17	29	0.8	0	-2
COTE D	ABIDJAN	31	26	32	23	29	1.2	93	-50
MOZAMB	MAPUTO	29	22	37	18	25	1.6	313	240
MALAWI	CHILEKA	***	***	34	21	***	***	***	***
ZIMBAB	HARARE	28	17	32	13	22	1.7	69	-32
S AFRI	PRETORIA	26	17	33	12	21	0.6	132	31
	KROONSTAD	25	14	29	7	20	***	81	***
	JOHANNESBURG	22	13	27	7	18	-0.4	116	-2
	BETHAL	24	13	31	7	18	0.2	68	-59
	DURBAN	26	20	30	16	23	1.5	222	114
	CAPE TOWN	25	15	31	10	20	1.8	10	-6
CANADA	TORONTO	12	3	20	-2	7	3.9	76	5
	MONTREAL	9	1	17	-6	5	3.0	82	-12
	WINNIPEG	6	-4	18	-10	1	5.5	13	-8
	REGINA	6	-6	18	-13	0	5.1	9	-3
	SASKATOON	4	-6	15	-13	-1	4.7	8	-6
	LETHBRIDGE	8	-5	19	-25	2	2.7	13	-4
	CALGARY	6	-6	19	-20	0	2.8	17	5
	EDMONTON	4	-5	17	-19	-1	3.2	5	-11
	VANCOUVER	11	5	16	-1	8	1.7	143	-27
MEXICO	GUADALAJARA	26	11	27	4	18	0.7	0	-13
	TOLUCA	17	5	21	-2	11	-0.4	10	-10
	ACAPULCO	31	24	33	21	28	-0.1	0	-44
BERMUD	ST. GEORGES	24	19	26	14	21	-0.3	173	54
BAHAMA	NASSAU	27	20	29	18	24	-0.1	459	404
CUBA	HAVANA/MARTI	27	18	29	13	23	-1.3	3	-49
JAMAIC	KINGSTON	31	24	33	22	28	0.7	190	109
P RICO	SAN JUAN	29	24	33	21	26	-0.2	80	-71
GUADEL	RAIZET	31	23	33	19	27	1.0	77	-64
MARTIN	LAMENTIN	31	23	33	20	27	1.2	106	-84
BARBAD	BRIDGETOWN	31	24	33	22	28	0.6	45	-87
TRINID	PORT OF SPAIN	33	24	33	22	28	2.1	149	-50
COLOMB	BOGOTA	20	8	22	2	14	0.4	48	-40
F GUIA	CAYENNE	32	22	33	21	27	0.8	77	-78
BRAZIL	FORTALEZA/PINT	31	26	33	24	28	0.4	20	1
	RECIFE	30	23	31	20	27	0.4	31	-13
	BELO HORIZONTE	28	19	31	17	24	0.7	323	81
	CAMPO GRANDE	31	22	34	19	27	1.6	296	139
	FRANCA	27	19	31	17	23	4.4	224	23
	RESENDE	29	19	34	16	24	1.9	149	-17
	LONDRINA	31	19	36	15	25	2.6	80	-71
	SANTA MARIA	28	17	36	9	22	0.9	110	-23
	PORTO ALEGRE	27	17	35	12	22	0.6	108	33
PERU	LIMA	20	16	22	14	18	-1.1	0	0
BOLIVI	LA PAZ	18	3	26	-1	11	0.3	21	-29
CHILE	SANTIAGO	25	9	32	3	17	-0.1	0	-8
ARGENT	FORMOSA	31	21	38	16	26	1.5	109	-74
	POSADAS	31	20	37	15	26	1.9	214	61
	CERES	28	16	36	10	22	-0.8	133	34
	CORDOBA	26	14	36	6	20	-0.7	92	-8
	RIO CUARTO	26	14	35	6	20	-0.1	26	-95
	ROSARIO	27	15	35	9	21	0.7	128	31
	BUENOS AIRES	24	13	32	6	19	-0.2	131	33
	SANTA ROSA	24	11	31	4	18	-1.7	103	3
	TRES ARROYOS	23	11	31	3	17	0.6	139	64
SAMOA	PAGO PAGO	31	26	34	24	29	1.8	202	-73
TAHITI	PAPEETE	30	23	32	20	27	0.7	61	-100
NZEALA	AUCKLAND	19	14	23	10	16	***	81	***
	WELLINGTON	17	13	26	7	15	***	97	***
AUSTRA	DARWIN	33	25	35	23	29	-0.1	177	45
	GOONDIWINDI	28	17	36	11	23	-1.5	52	-12
	BRISBANE	26	18	30	13	22	-0.8	192	82
	PERTH	28	14	37	6	21	1.3	24	1
	CEDUNA	23	12	35	5	18	-1.7	27	8
	ADELAIDE	21	12	31	7	17	-1.4	41	19
	MELBOURNE	20	10	29	2	15	-1.2	66	18
	WAGGA	25	9	33	2	17	-0.9	12	-28
	CANBERRA	22	8	29	1	15	-0.4	50	-15
INDONE	BANDUNG/HUSEIN	***	***	29	19	***	***	390	128
PHILIP	MANILA	31	25	33	21	28	0.6	49	-69

Based on Preliminary Reports

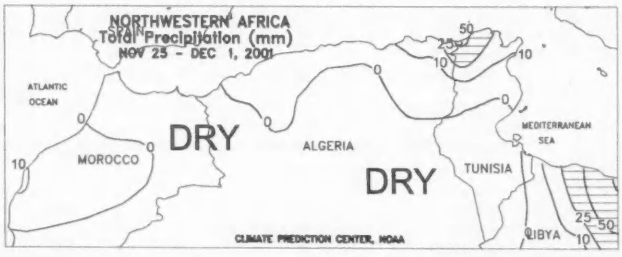
EUROPE

In England, northern and central France, the Benelux countries, and most of Germany, widespread showers (15-60 mm or more) maintained abundant moisture supplies for well-established winter grains, but hampered late sugar beet harvesting in England. In contrast, mostly dry weather (generally less than 10 mm) prevailed in northern Italy, southern France, and the Iberian peninsula, favoring winter grain planting and late corn harvesting in Spain and Portugal. Moisture supplies remained adequate for winter grain development in these areas. In southern Italy, scattered showers (4-39 mm) continued to help early durum wheat development. Farther east, scattered rain and snow (4-35 mm or more, liquid equivalent) in eastern Europe maintained moisture supplies for mostly dormant winter grains and oilseeds. Temperatures in eastern Europe averaged about 0 to 3 degrees C below normal. The persistently cold weather helped winter grains ease into dormancy in much of southeastern Europe and kept winter crops dormant in northeastern Europe. In the remainder of southern Europe, near- to below-normal temperatures slowed crop development in Italy and the western and southern Iberian peninsula. Temperatures in these regions averaged about 1 to 2 degrees C below normal. Elsewhere in western and central Europe, temperatures averaged about 1 to 4 degrees C above normal, allowing for continued crop development.



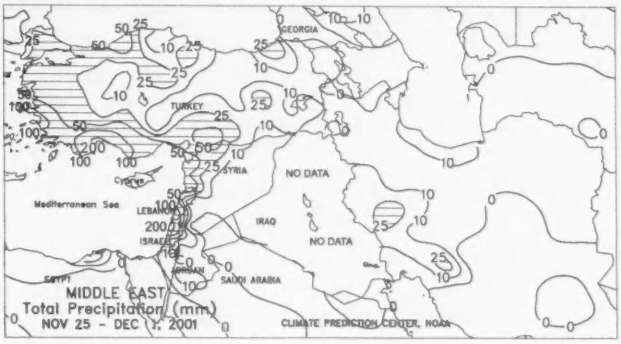
FSU-WESTERN

Widespread rain and snow favored dormant winter grains over most of the region. The greatest amounts of precipitation (25-50 mm or more) were observed over a large portion of Ukraine and the middle Volga Valley. Significant precipitation (25-55 mm) fell in chronically dry areas of south-central and southeastern Ukraine, providing much-needed soil moisture. Elsewhere, light to moderate snow (4-22 mm of liquid equivalent) fell from the Baltics and Belarus eastward through northern Russia, increasing the protective snow cover. In southwestern Ukraine, rain early in the week was followed by heavy snow at week's end. Weekly temperatures were low enough to prompt winter grains to enter dormancy in most areas. Bitterly cold weather (temperatures below -15 degrees C) was confined to extreme northeastern areas in Russia. In major winter wheat-producing areas of Ukraine and southern Russia, extreme minimum temperatures generally ranged from -8 to 2 degrees C. By week's end, snow covered most of northern Russia, western and northern Ukraine, Belarus, and the Baltics, while most of southern Ukraine and the North Caucasus region in Russia remained snow free.



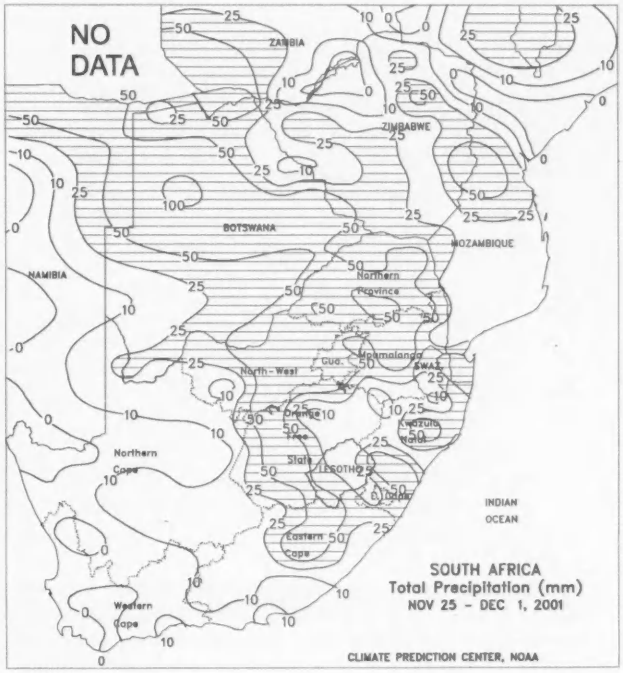
NORTHWESTERN AFRICA

Light showers (less than 10 mm) dampened topsoils in southern Morocco, while dry weather prevailed in northern Morocco. The dry conditions in Morocco continued to slow planting as growers awaited more rainfall. Plenty of time remains for planting winter grains, since planting can continue through mid-December. Dry weather continued in western Algeria. Although moisture conditions in western Algeria are adequate for winter grain planting, additional precipitation is needed for early crop development. Light showers (1-10 mm) in central Algeria and southern Tunisia dampened topsoils for winter grain planting and emergence, while heavier amounts (10-25 mm) in eastern Algeria and northern Tunisia benefited newly emerging winter grains.



MIDDLE EAST

A cool, wet weather pattern continued across Turkey, providing additional timely moisture for winter wheat establishment but hampering early crop development. Rainfall generally ranged from 10 to 25 mm in primary crop areas of the Anatolian Plateau and the southeast. However, heavy rain (50-100 mm or more) likely caused additional flooding in parts of southwestern Turkey. The excessive rain may have damaged some unharvested summer crops, including cotton, although harvests were reportedly well advanced before the rainy pattern became established in early November. Elsewhere, light showers (5-30 mm) boosted moisture reserves in Israel and Syria. In Iran, late-week rain benefited winter wheat in the west-central portion of the country but failed to reach crop areas in the northeast. Showers (25 mm or less) lingered along the Caspian Coast. Although seasonal temperatures are limiting winter wheat development, especially in the northwest, rain is still needed across Iran to build moisture reserves for proper wheat establishment.

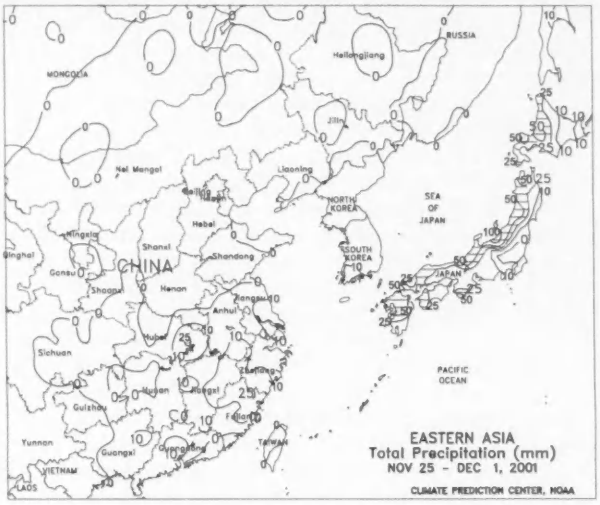


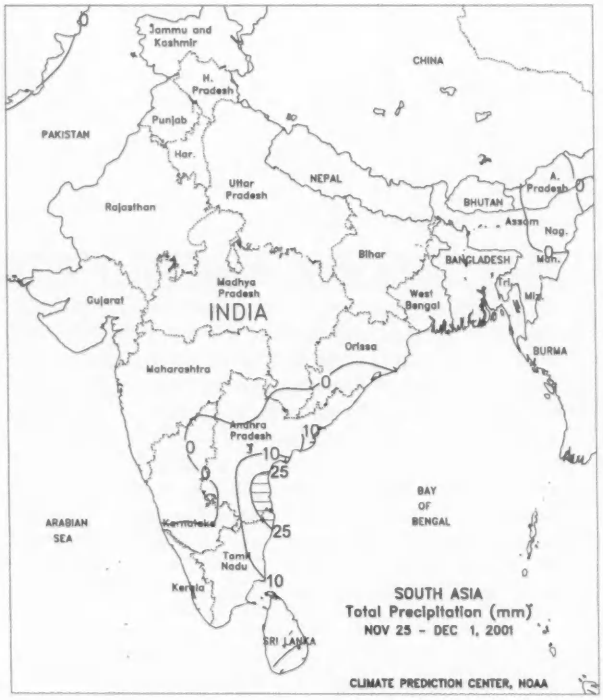
SOUTH AFRICA

Rain (5-25 mm or more) maintained generally favorable prospects for summer crop germination and establishment. Following a brief respite, heavier rain (25-50 mm or more) returned to eastern and northern sections of the corn belt, slowing fieldwork but helping to further build long-term moisture reserves. Temperatures averaged slightly below normal across the corn belt, with highs in the middle to upper 30s degrees C, favoring development of emerging crops. Elsewhere, moderate to heavy showers (10-50 mm or more) maintained adequate to abundant irrigation reserves for sugarcane and other summer crops in KwaZulu-Natal and neighboring sections of Eastern Cape. Warm, dry weather increased irrigation requirements in crop areas of Western Cape.

EASTERN ASIA

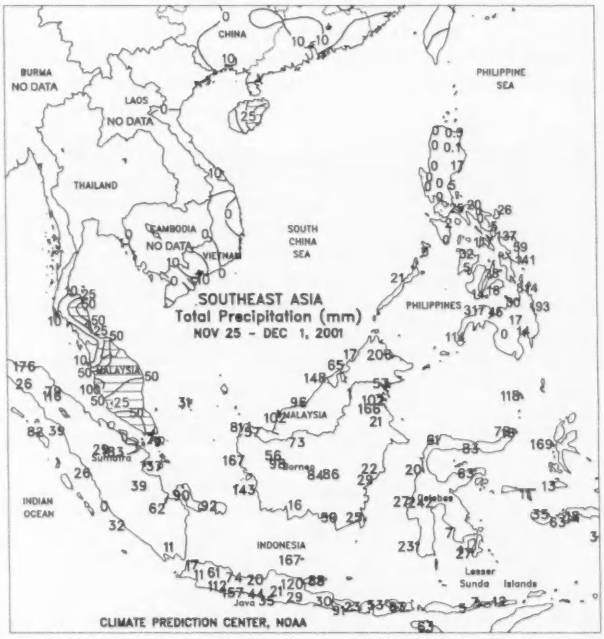
Across the North China Plain, seasonably cold, dry weather began to harden winter wheat. Freezing temperatures extended to the southern North China Plain (central Anhui and Jiangsu). These freezes occurred later than average. Light showers (5-25 mm) returned to the Yangtze Valley and southern China, increasing topsoil moisture for winter crops, but more rain is still needed to ease short-term moisture deficits. Across this region, temperatures averaged 2 to 4 degrees C above normal, increasing evapotranspiration rates.





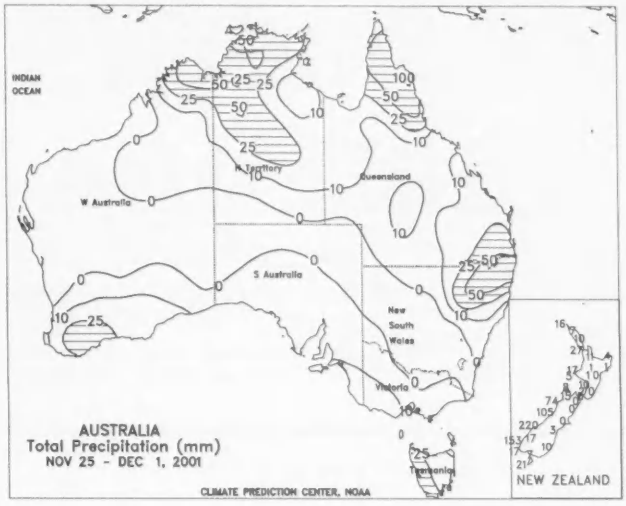
SOUTH ASIA

Seasonably dry weather dominated the region, with light, scattered showers (less than 25 mm) confined to coastal rice areas of southeastern India (Tamil Nadu and Andhra Pradesh). Conditions were favorable for drydown and harvesting of grains, oilseeds, and cotton, as well as early development of newly planted dry-season (rabi) crops, including rice. Across the north, planting of the mostly irrigated winter wheat and oilseed crop continued. Temperatures averaged near to above normal, with highs across the region generally in the upper 20s and lower 30s degrees C.



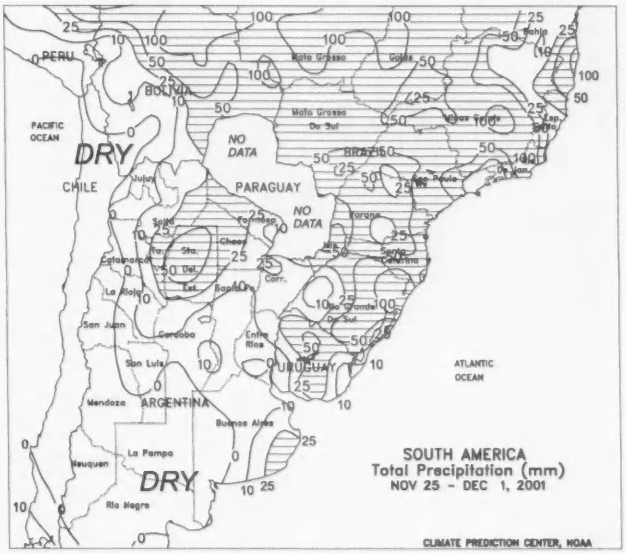
SOUTHEAST ASIA

Tropical showers continued their seasonal migration southward. Showers (25-100 mm) in Java, Indonesia, maintained favorable moisture supplies for vegetative main-season rice. Throughout oil palm areas of peninsular Malaysia and Sumatra, showers (25-100 mm, locally more) maintained moisture supplies. Generally dry conditions favored fieldwork for rice and plantation crops in Luzon, Philippines. Seasonably dry weather allowed rice harvesting to progress throughout Thailand and Vietnam.



AUSTRALIA

Widespread showers (15-40 mm or more) continued in southern Queensland and northern New South Wales. The heaviest rain (greater than 50 mm) fell in northeastern New South Wales, increasing irrigation reserves for newly planted summer crops, including sugarcane, but possibly flooding cotton fields. Near- to slightly below-normal temperatures, with highs in the upper 20s to lower 30s degrees C, kept summer crop growth rates at lower-than-expected levels. Warmer weather (highs in the middle 30s degrees C) accompanied scattered, mostly light showers in the grazing lands of western Queensland. In the southeast (South Australia to southern New South Wales), mostly dry weather aided winter crop harvesting, but below-normal temperatures (highs generally in the middle to upper 20s degrees C) slowed drydown following last week's breezy, wet weather. Warm, dry weather aided fieldwork in Western Australia, but showers (10-25 mm) developed late in the week in southern growing areas. In New Zealand, mild, dry weather aided crop and pasture growth following recent weeks of beneficial rainfall.



SOUTH AMERICA

In central Argentina, mostly dry weather favored filling to maturing winter wheat and summer crop planting. The only significant rain (10-40 mm) occurred in southeastern Buenos Aires, favoring reproductive to filling winter wheat. In northern Argentina, the cotton areas remained dry with only scattered rain (5-25 mm). Across Argentina, temperatures averaged 1 to 3 degrees C below-normal. According to the Argentine Agricultural Secretariat as of November 30, nationwide corn, sorghum, sunflowers, and soybeans were 72, 65, 73, and 48 planted, respectively, compared with 79, 58, 87, and 50 percent last year. In Buenos Aires, corn was 74 percent planted compared with 96 percent last year. In southern Brazil, widespread showers (25-80 mm or more) covered the major soybean- and corn-producing areas, maintaining adequate to abundant soil moisture for soybeans. The moisture also benefited sugarcane, coffee, oranges in Sao Paulo and Minas Gerais and the cocoa areas of coastal Bahia. Lighter showers (10-30 mm) fell across Espirito Santo and northern Minas Gerais, easing excessive wetness from last week's rain. According to Safras, a Brazilian grain analyst firm, as of November 30, soybeans were 83 percent planted, compared with the 5-year average of 80 percent.

The *Weekly Weather and Crop Bulletin* (ISSN 0043-1974) is published weekly and jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the *Weekly Weather Chronicle*. It is issued under general authority of the Act of January 12, 1895 (44-USC 213), 53rd Congress, 3rd Session. NOAA is responsible for managing, printing, and distributing the bulletin. The contents may be reprinted freely, with proper credit.

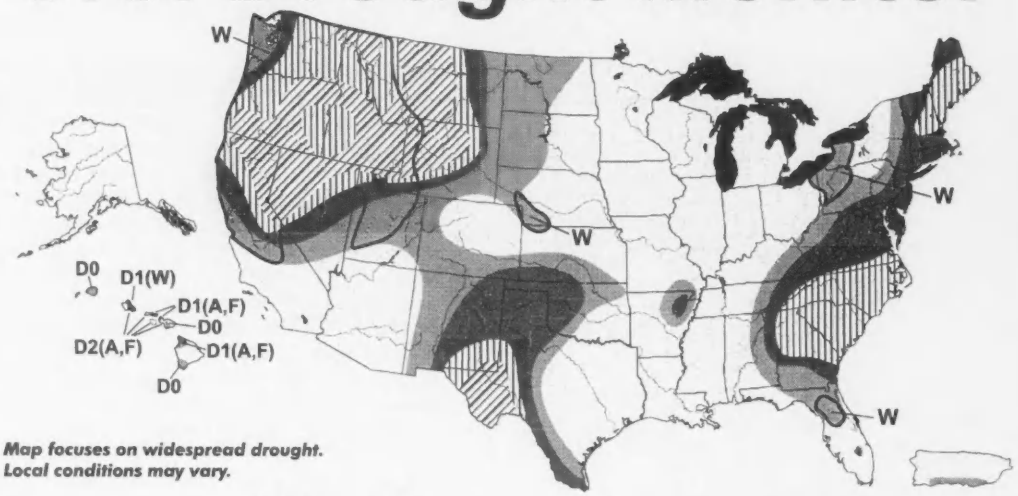
Annual subscriptions: domestic first class **$45**, foreign **$55** (in U.S. funds by international money order or check drawn on U.S. bank) payable to **U.S. Department of Commerce, NOAA**. POSTMASTER: Send address changes to: **Climate Prediction Center, W/NP52, Attn: *Weekly Weather and Crop Bulletin*, Room 605, WWBG, 5200 Auth Road, Camp Springs, MD 20746-4304**. Order subscriptions from the office and address listed above. First-class postage paid at Washington, DC, and other mailing offices. Correspondence to the meteorologists should be directed to: **Weekly Weather and Crop Bulletin, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 5844, Washington, DC 20250**. Internet URL: **http://www.usda.gov/oce/waob/jawf**; E-mail address: ***bmorris@oce.usda.gov***

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Climate Prediction Center
Managing Editor . . . . . ***David Miskus*** *(202) 720-7919*
Meteorologists . . . . . ***Eric Luebehusen, Brad Pugh,***
. . . . . and ***Chester Schmitt***
Subscriptions . . . . ***John Kopman*** (301) 763-8000 ext 7534
. . . . . **fax:** (301) 763-8125

U.S. DEPARTMENT OF AGRICULTURE
Economic Research Service
E.R.S. Editor . . . . . ***Sharon Lee***
National Agricultural Statistics Service
Agricultural Statistician . . . . . ***Mark Miller*** (202) 720-7621
State Summaries Editor . ***Delores Thomas*** (202) 720-8033
World Agricultural Outlook Board
International Editor . . . . . ***Tom Puterbaugh***
U.S. Editor . . . . . ***Brad Rippey*** (202) 720-2397
Agricultural Weather Analysts . . . . . ***Mark Brusberg***
. . . . . ***Bob Stefanski, Brian Morris,*** and ***Harlan Shannon***
Stoneville . . . . . ***Lee Crowley*** and ***Josh Stewart***

November 27, 2001 Valid 8 a.m. EST

U.S. Drought Monitor



Map focuses on widespread drought. Local conditions may vary.

D0 Abnormally Dry
D1 Drought-First Stage
D2 Drought–Severe
D3 Drought–Extreme
D4 Drought–Exceptional
Delineates Overlapping Areas

Drought Impact Types:
A = Agriculture
W = Water (Hydrological)
F = Fire danger (Wildfires)
(No type = All 3 impacts)

USDA National Drought Mitigation Center

See accompanying text summary for forecast statements
http://enso.unl.edu/monitor/monitor.html

• Released Thursday, November 29, 2001 •
Author: Brad Rippey, USDA

Climate Prediction Center, W/NP52
Attn: *Weekly Weather & Crop Bulletin*
NOAA/NWS/NCEP/CPC
5200 Auth Road
WWB, Room 605
Camp Springs, MD 20746-4304

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

WWCB 1

UMI
Periodicals check In
P.O.Box 1346
Ann Arbor MI 48106-1346

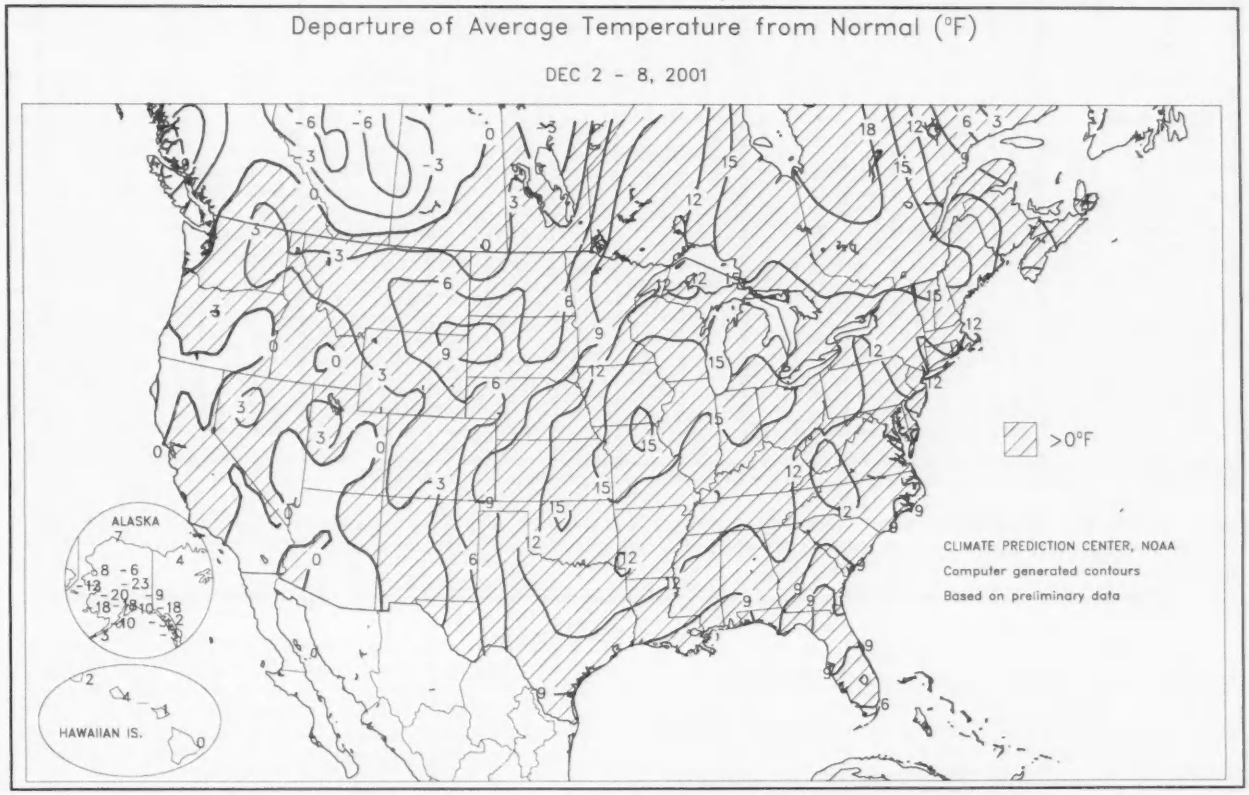
FIRST CLASS MAIL
POSTAGE & FEES PAID
NOAA
PERMIT NO. G-19

Volume 88, No. 50 http://www.usda.gov/oce/waob/jawf/wwcb.html December 11, 2001

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
and World Agricultural Outlook Board



HIGHLIGHTS

December 2 - 8, 2001

Highlights provided by USDA/WAOB

Record warmth prevailed from the **Plains eastward**, elevating weekly temperatures as much as 18°F above normal in the **lower Great Lakes region** and resulting in more than a dozen monthly record highs on December 5-6 from the **Midwest into the Northeast**. At week's end, however, cooler air overspread the **Midwest** and **Northeast**, setting the stage for the first significant snowfall of the season in the latter region. Although the early-December warmth promoted some late-season winter wheat development from the **southern Plains to the Ohio Valley**, dryness continued to limit wheat growth in the **southern Atlantic States**. Meanwhile, dry weather

(Continued on page 3)

Contents

Weather Data for the Delta and Bootheel & Total Precipitation Map 2
Extreme Maximum & Minimum Temperature Maps .. 3
National Weather Data for Selected Cities 4
November Weather and Crop Summary 7
November Maximum & Minimum Temperature Maps 9
November Precipitation & Temperature Maps 10
November Weather Data for Selected Cities 11
Autumn Weather Review 12
Autumn Precipitation & Temperature Maps 13
Autumn Weather Data for Selected Cities 14
National Agricultural Summary & Snow Cover Map 15
International Weather and Crop Summary 16
Subscription Information & December 4 Drought Monitor 20

Weather Data for Selected Locations in the Delta and the Bootheel

Weather Data for the Week Ending December 8, 2001

Data provided by the Mississippi State Delta Research and Extension Center (DREC), the Southern Regional Climate Center (SRCC), and the University of Missouri.

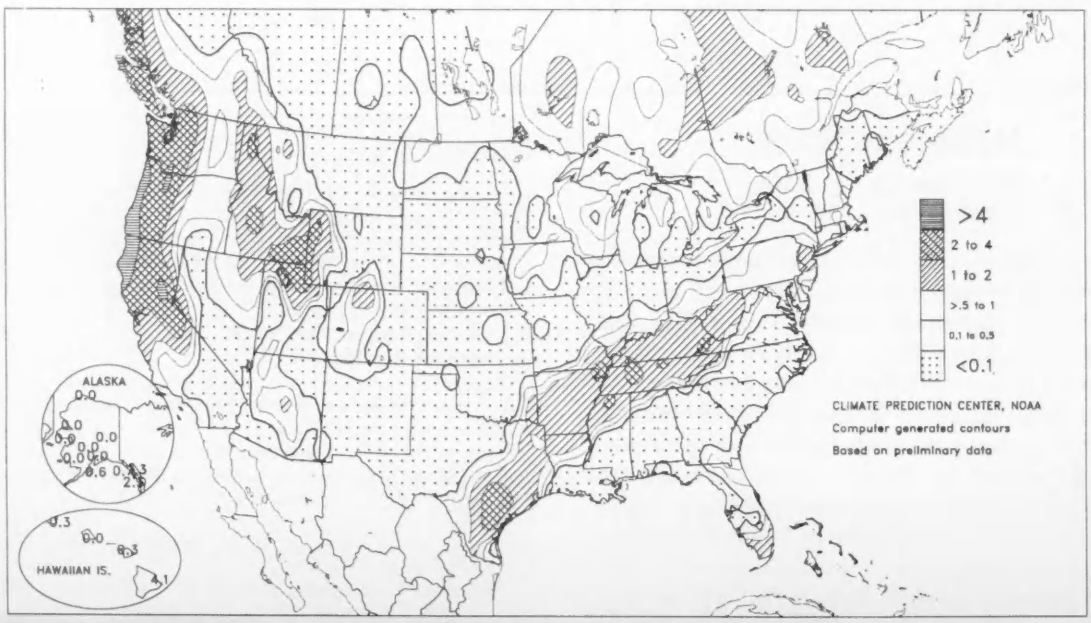
STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							4-INCH SOIL TEMP, °F		NUMBER OF DAYS			
																	TEMP °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN. SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL, IN. SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
MS	BATESVILLE [X]	70	49	75	33	60	14	2.04	0.78	1.49	2.04	142	57.93	116	--	--	0	0	2	2
	CLARKSDALE [X]	67	48	74	37	58	11	2.10	0.91	1.32	2.10	154	--	--	--	--	0	0	2	2
	CLEVELAND [X]	68	51	72	39	60	12	0.94	-0.13	0.68	0.94	77	58.82	132	--	--	0	0	2	1
	GREENVILLE [X]	68	50	74	40	59	10	1.38	0.14	0.78	1.38	96	59.13	126	--	--	0	0	2	2
	GREENWOOD [X]	71	50	76	37	61	12	0.72	-0.44	0.43	0.72	54	56.93	122	--	--	0	0	2	0
	INDIANOLA 1S	69	51	73	41	60	--	0.87	--	0.49	0.87	--	60.31	--	61	55	0	0	2	0
	INVERNESS 5E	70	52	75	43	61	--	1.21	--	0.70	1.21	--	54.05	--	62	56	0	0	2	2
	LYON	--	--	--	--	--	--	1.62	--	1.17	1.62	--	66.70	--	--	--	--	--	--	--
	MOORHEAD [X]	70	53	77	44	62	13	0.66	-0.66	0.64	0.66	44	52.62	110	--	--	0	0	2	1
	ONWARD	71	52	77	42	62	--	0.44	--	0.44	0.44	--	49.72	--	60	56	0	0	1	0
	ROLLING FORK [X]	71	51	78	42	61	12	0.00	-1.28	0.00	0.00	0	43.95	92	--	--	0	0	0	0
	SCOTT	68	51	72	41	60	--	0.96	--	0.63	0.96	--	--	--	61	54	0	0	3	1
	SIDON	71	52	77	42	62	--	1.08	--	0.57	1.08	--	46.93	--	64	54	0	0	2	2
	TUNICA [X]	67	50	71	36	59	13	1.02	-0.24	1.02	1.02	71	50.58	108	--	--	0	0	1	1
	TUNICA 1W	67	49	72	37	58	--	0.93	--	0.73	0.93	--	49.41	--	59	53	0	0	3	1
	VANCE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	VICKSBURG [X]	73	51	78	39	62	10	0.00	-1.26	0.00	0.00	0	67.03	134	--	--	0	0	0	0
	YAZOO CITY [X]	72	49	77	36	61	11	0.00	-1.40	0.00	0.00	0	55.91	111	--	--	0	0	0	0
	STONEVILLE *	68	50	74	40	59	12	1.60	0.21	0.85	1.60	100	63.23	131	63	54	0	0	2	2
MO	CARDWELL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	CHARLESTON	62	45	69	36	54	16	1.41	0.18	0.78	1.41	104	36.78	80	56	48	0	0	2	2
	CLARKTON	62	45	70	34	54	12	1.86	0.65	1.00	1.86	145	40.58	94	--	--	0	0	3	2
	DELTA	60	43	66	32	51	11	0.86	-0.36	0.57	0.86	62	32.65	67	53	46	0	1	2	1
	GLENNONVILLE	62	46	69	35	55	13	1.43	0.22	0.88	1.43	112	35.86	83	56	50	0	0	3	2
	PORTAGEVILLE #1	63	48	72	38	56	13	1.77	0.53	1.16	1.77	129	40.98	86	57	49	0	0	3	2
	PORTAGEVILLE #2	65	48	71	38	56	13	1.83	0.59	1.23	1.83	134	37.10	78	57	50	0	0	3	2
	STEELE	64	47	72	38	56	13	1.18	-0.18	0.64	1.18	79	43.31	88	57	50	0	0	3	2

Compiled by USDA/OCE/WAOB's Stoneville Field Office. * Based on 1964-93 normals. [X] Based on 1961-90 normals.

Delta and Bootheel Weather and Crop Summary: The majority of last week was dry and unseasonably warm. A slow-moving weather system brought the return of wet weather by week's end. Some fields remained flooded due to late November's heavy rainfall, and wet conditions continued to hamper fieldwork.

Total Precipitation (Inches)

DEC 2 - 8, 2001



(Continued from front cover)

prevailed for much of the week in the previously soaked **lower Mississippi Valley** and adjacent areas, allowing water to drain from fields that were still flooded. However, widespread showers returned toward week's end, bringing renewed fieldwork delays and lowland flooding. In the **West**, heavy precipitation fell in many areas from **northern California and the Great Basin northward**, further easing long-term drought and boosting topsoil moisture reserves and high-elevation snow packs. Farther south, sporadic, generally light precipitation was observed in **southern California** and the **Southwest**.

Early in the week, a strong Pacific storm produced heavy precipitation as far east as the **western Great Basin**, where **Reno, NV**, netted a daily-record total (1.19 inches) on December 2. Reno's water year-to-date (October 1 - December 8) precipitation climbed to 2.16 inches, exceeding their record-low total of 2.13 inches observed from October 1, 2000, to September 30, 2001. In **northern California**, peak wind gusts on December 2 included 52 mph in **Sacramento** and 48 mph in **Red Bluff**. Meanwhile in the **Sierra Nevada**, high-elevation locations added approximately 6 inches of liquid to the snow pack during the first 8 days of December, according to the California Department of Water Resources. Some **Sierra Nevada** locations, including **Carson Pass**, received more than 5 feet of snow during the early-December storm. The average liquid equivalent of the **Sierra Nevada** snow pack, which contained only a trace of liquid on November 12, increased to 11 inches (150 percent of normal) on December 8.

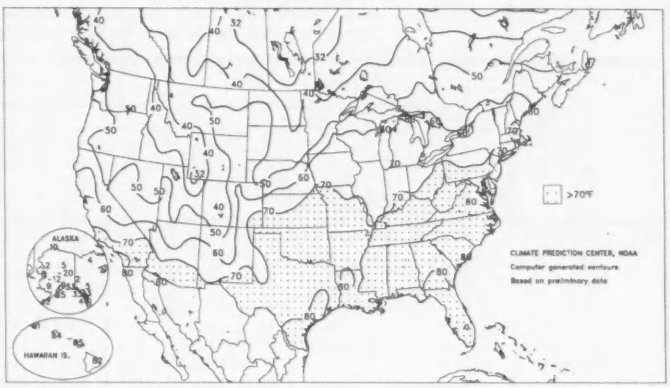
Farther east, record warmth developed across the **central Plains** on Monday, expanding throughout the **eastern half of the country** from December 4-6. Some record warmth lingered in the **Southeast** through week's end. Nearly 200 daily-record highs were set or tied during the week, including well over a dozen December-record highs. The parade of record began in **Kansas** on December 3 with highs of 76°F in **Liberal** and **Ashland**. A day later, **Gilbert, AR**, noted 80°F. On December 5, when nearly 100 daily records were broken, monthly record highs included 70°F in **Flint, MI**, 68°F in **Milwaukee, WI**, and 67°F in **Rockford, IL**. Most of the previous December records had been set in 1962, 1982, or 1998. In a final flurry of monthly records on Thursday, all-time December highs included 72°F in **Syracuse, NY**, and 71°F in **Portland, ME**.

Through December 8, only six freezes were noted in **Indianapolis, IN**, their latest such observance since 1923, when their seventh freeze occurred on December 11. Farther west, **Rochester, MN**, set a pair of records: the latest autumn observance of the first high temperature below freezing (30°F on December 8) and first low temperature below 20°F (15°F on December 8). **Rochester's** former records were established on December 5, 1999, and December 5, 1962, respectively. Meanwhile, **Albany, NY**, notched a daily-record high of 68°F on Thursday, highlighting their first December 1-7 period on record with high temperatures at or above 50°F. However, sharply colder air arrived in **Albany** on December 8-9, accompanied by a 7.4-inch snowfall. Elsewhere in the **Northeast**, storm-total snowfall reached 9.0 inches in **Worcester, MA**, and 8.0 inches in **Jaffrey, NH**. In contrast, only 0.1 inch fell in **Buffalo, NY**, leaving the snow-belt city awaiting its first 1-inch snowfall of the season. Similarly, **LaCrosse, WI**, received no measurable snowfall through December 8, breaking their record set in 1969, when the first accumulating snow fell on December 7.

Seasonal showers continued across **Hawaii**, bringing additional relief from long-term rainfall deficits. Precipitation was heaviest in windward locations on the **Big Island**, where **Glenwood** received 5.28 inches in 72 hours from December 2-5 and 4.33 inches in 48 hours from December 7-9. With 2.03 inches on Monday, **Hilo** measured daily-record total for December 3. On **Oahu**, the **Manoa Lyon Arboretum** netted 2.55 inches in 24 hours on December 5-6. Meanwhile, bitterly cold weather overspread much of **Alaska**, holding weekly temperatures more than 20°F below normal across the southern interior portion of the State. In **Anchorage**, low temperatures fell below 0°F on the first 8 days of the month, including a low of -11°F on December 7, following 682 days without sub-zero readings. High temperatures failed to climb above -20°F in **Fairbanks** during the week, and lows fell to -30°F or below from December 3-8. On December 5, lows dipped to -35°F in **Fairbanks** and **McGrath**.

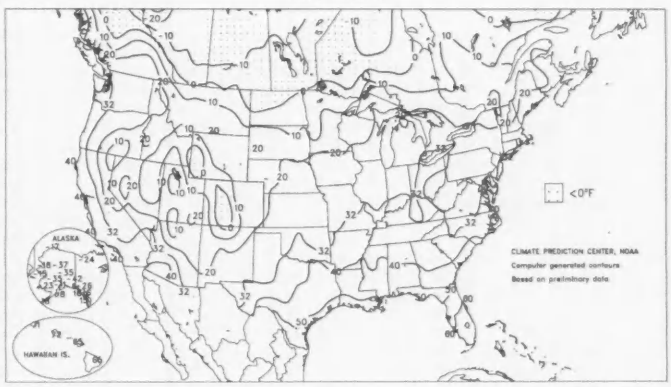
Extreme Maximum Temperature (°F)

DEC 2 - 8, 2001



Extreme Minimum Temperature (°F)

DEC 2 - 8, 2001



Monthly Record Highs (°F), December 5-6, 2001

Location/Date	High	Former Record/Date
December 5		
South Bend, IN	70	70 on Dec. 2, 1982
Flint, MI	70	67 on Dec. 3, 1982
Grand Rapids, MI	69	67 on Dec. 2, 1982
Milwaukee, WI	68	64 on Dec. 3, 1998
Rockford, IL	67	66 on Dec. 4, 1998, & Dec. 28, 1984
Oshkosh, WI	65	63 on Dec. 2, 1962
Alpena, MI	65	65 on Dec. 25, 1982
Houghton Lake, MI	64	54 on Dec. 3, 1962
Green Bay, WI	64	62 on Dec. 3, 1998, & Dec. 1, 1970
Appleton, WI	64	61 on Dec. 3, 1998
Madison, WI	64	62 on Dec. 5, 1998, & earlier dates
Eau Claire, WI	64	63 on Dec. 1, 1998, & Dec. 2, 1982
Sault Ste. Marie, MI	62	60 on Dec. 3, 1982
Wausau, WI	61	61 on Dec. 2, 1982
December 6		
Syracuse, NY	72	70 on Dec. 7, 1998, & Dec. 10, 1966
Portland, ME	71	71 on Dec. 7, 1998
Massena, NY	68	65 on Dec. 7, 1998, & Dec. 3, 1982
Montpelier, VT	67	67 on Dec. 7, 1998
Mt. Washington, NH	47	45 on several dates

Compiled from National Weather Service record reports and Midwestern Regional Climate Center summaries. Data are preliminary and subject to change.

National Weather Data for Selected Cities

Weather Data for the Week Ending December 8, 2001

Data Provided by Climate Prediction Center (301-763-8000, Ext. 7503)

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	71	46	74	38	59	11	0.00	-1.12	0.00	0.00	0	61.87	122	95	46	0	0	0	0
	HUNTSVILLE	68	46	72	37	57	12	0.49	-0.82	0.40	0.49	33	57.79	109	91	63	0	0	2	0
	MOBILE	75	50	78	45	63	8	0.03	-1.14	0.01	0.03	2	51.86	86	97	59	0	0	3	0
	MONTGOMERY	74	45	78	41	60	8	0.01	-1.14	0.01	0.02	2	44.37	90	99	54	0	0	1	0
AK	ANCHORAGE	7	-8	9	-11	-1	-18	0.00	-0.25	0.00	0.00	0	13.45	89	86	71	0	7	0	0
	BARROW	3	-8	10	-17	-2	7	0.00	-0.03	0.00	0.01	33	4.99	114	88	83	0	7	0	0
	FAIRBANKS	-23	-32	-20	-35	-27	-23	0.00	-0.19	0.00	0.00	0	8.26	81	71	69	0	7	0	0
	JUNEAU	31	22	43	6	26	-3	1.30	0.31	0.96	1.30	115	56.00	110	87	75	0	6	6	1
	KODIAK	28	15	35	8	22	-10	0.61	-0.83	0.50	0.61	37	69.12	111	76	53	0	7	4	1
	NOME	4	-11	8	-15	-3	-12	0.00	-0.19	0.00	0.00	0	12.69	89	77	69	0	7	0	0
AZ	FLAGSTAFF	43	19	49	6	31	0	0.37	-0.17	0.37	0.37	61	16.65	79	81	33	0	7	1	0
	PHOENIX	67	45	74	42	56	0	0.55	0.33	0.54	0.55	220	6.39	92	76	47	0	0	2	1
	TUCSON	67	36	77	30	51	-3	0.08	-0.14	0.08	0.08	32	7.31	65	72	37	0	2	1	0
	YUMA	69	48	74	42	59	1	0.01	-0.08	0.01	0.01	10	3.32	118	58	52	0	0	1	0
AR	FORT SMITH	67	46	79	33	56	13	0.38	-0.41	0.21	0.38	42	35.34	91	94	64	0	0	3	0
	LITTLE ROCK	68	48	76	37	58	12	0.94	-0.24	0.61	0.94	70	43.26	91	99	62	0	0	2	1
CA	BAKERSFIELD	60	40	70	34	50	1	0.16	0.02	0.10	0.17	106	6.86	131	89	69	0	0	3	0
	FRESNO	57	41	66	37	49	2	0.03	-0.27	0.03	0.15	43	10.21	107	92	74	0	0	1	0
	LOS ANGELES	68	50	80	45	59	1	0.23	-0.13	0.23	0.23	56	18.55	172	67	42	0	0	1	0
	REDDING	53	40	63	30	46	0	1.42	0.21	0.83	2.75	198	29.60	101	91	79	0	1	3	1
	SACRAMENTO	57	44	61	33	50	3	1.29	0.75	1.02	1.98	325	16.97	109	97	65	0	0	4	1
	SAN DIEGO	67	49	76	45	58	0	0.14	-0.22	0.11	0.14	34	8.22	94	78	54	0	0	2	0
	SAN FRANCISCO	58	48	61	43	53	2	2.29	1.66	2.04	3.48	483	21.09	122	93	76	0	0	4	1
	STOCKTON	56	43	63	34	50	3	0.69	0.23	0.58	1.07	206	11.49	93	92	80	0	0	5	1
CO	ALAMOSA	41	5	49	-3	23	2	0.00	-0.11	0.00	0.00	0	9.74	134	87	51	0	7	0	0
	CO SPRINGS	52	24	62	11	38	6	0.00	-0.11	0.00	0.00	0	14.94	94	63	17	0	7	0	0
	DENVER INTL	49	27	57	16	38	***	0.00	***	0.00	0.00	***	15.19	***	69	32	0	5	0	0
	GRAND JUNCTION	44	27	52	19	35	3	0.17	0.03	0.08	0.17	106	8.25	101	89	60	0	7	4	0
	PUEBLO	59	19	66	7	39	6	0.00	-0.11	0.00	0.00	0	11.43	105	59	24	0	7	0	0
CT	BRIDGEPORT	57	39	67	32	48	10	0.42	-0.40	0.32	0.43	46	33.73	86	88	57	0	2	3	0
	HARTFORD	57	35	68	25	46	13	0.15	-0.76	0.13	0.16	15	31.78	77	86	47	0	4	2	0
DC	WASHINGTON	65	44	75	36	55	12	0.57	-0.15	0.57	0.57	70	29.08	80	87	48	0	0	1	1
DE	WILMINGTON	61	40	72	31	51	12	0.59	-0.21	0.59	0.59	65	32.47	85	92	50	0	1	1	1
FL	DAYTONA BEACH	79	64	83	60	72	10	0.07	-0.51	0.04	0.07	11	58.01	126	99	65	0	0	4	0
	JACKSONVILLE	75	55	81	48	65	8	0.34	-0.22	0.33	0.34	53	46.37	94	10	70	0	0	2	0
	KEY WEST	80	72	82	71	76	3	1.03	0.55	0.87	1.03	184	44.92	118	90	73	0	0	2	1
	MIAMI	81	71	82	69	76	6	1.75	1.32	1.18	1.76	359	70.59	129	88	65	0	0	4	1
	ORLANDO	81	63	83	61	72	8	0.08	-0.42	0.08	0.08	14	54.89	118	10	62	0	0	1	0
	PENSACOLA	74	52	78	47	63	7	0.05	-0.86	0.02	0.06	6	45.26	77	91	59	0	0	4	0
	TALLAHASSEE	76	49	81	43	63	8	0.09	-1.01	0.08	0.10	8	62.81	101	98	61	0	0	2	0
	TAMPA	83	66	85	62	74	10	0.16	-0.31	0.16	0.16	30	39.03	92	95	57	0	0	1	0
	WEST PALM	81	70	82	64	76	7	1.00	0.35	0.67	1.05	138	64.99	110	91	68	0	0	4	1
GA	ATHENS	72	44	77	35	58	10	0.00	-0.88	0.00	0.00	0	38.20	82	91	49	0	0	0	0
	ATLANTA	71	48	75	44	60	13	0.00	-0.94	0.00	0.00	0	36.57	77	87	52	0	0	0	0
	AUGUSTA	75	42	79	34	58	9	0.00	-0.69	0.00	0.01	1	32.62	78	96	54	0	0	0	0
	COLUMBUS	75	48	78	45	61	10	0.01	-1.06	0.01	0.02	2	36.81	78	93	42	0	0	1	0
	MACON	75	43	79	37	59	8	0.10	-0.78	0.08	0.11	11	45.72	111	95	45	0	0	3	0
	SAVANNAH	76	50	80	42	63	9	0.18	-0.41	0.17	0.18	26	31.18	66	98	58	0	0	2	0
HI	HILO	79	67	82	65	73	0	4.07	1.09	1.96	4.50	132	103.2	86	93	66	0	0	7	2
	HONOLULU	83	74	84	72	79	4	0.00	-0.82	0.00	0.00	0	8.41	44	74	66	0	0	0	0
	KAHULUI	81	68	83	65	75	1	0.30	-0.37	0.21	0.31	41	7.87	43	82	69	0	0	3	0
	LIHUE	79	73	81	71	76	2	0.34	-0.80	0.13	0.66	51	28.62	73	85	76	0	0	5	0
ID	BOISE	41	29	46	26	35	3	0.51	0.20	0.24	0.51	146	7.84	71	87	69	0	6	5	0
	LEWISTON	46	35	49	32	41	5	0.24	-0.04	0.12	0.24	77	10.48	91	75	55	0	1	2	0
	POCATELLO	34	22	43	14	28	1	0.66	0.41	0.23	0.72	257	6.73	60	89	77	0	7	4	0
IL	CHICAGO/O'HARE	55	38	68	26	46	15	0.03	-0.59	0.03	0.03	4	44.80	132	84	64	0	2	1	0
	MOLINE	57	34	69	26	45	16	0.10	-0.44	0.10	0.10	16	39.38	105	86	65	0	5	1	0
	PEORIA	57	37	67	28	47	16	0.13	-0.48	0.13	0.13	19	36.49	106	96	66	0	3	1	0
	ROCKFORD	54	34	67	27	44	16	0.10	-0.42	0.10	0.10	17	36.19	104	90	70	0	4	1	0
	SPRINGFIELD	58	38	67	29	48	14	0.08	-0.58	0.08	0.08	11	33.01	99	89	67	0	3	1	0
IN	EVANSVILLE	61	43	70	34	52	13	0.82	-0.06	0.64	0.82	81	43.62	108	91	74	0	0	3	1
	FORT WAYNE	56	41	67	29	48	16	0.05	-0.64	0.04	0.05	6	40.04	123	94	70	0	1	2	0
	INDIANAPOLIS	59	43	70	33	51	16	0.17	-0.63	0.17	0.17	19	39.07	104	90	63	0	0	1	0
	SOUTH BEND	56	41	70	29	49	16	0.09	-0.70	0.05	0.09	10	36.63	100	85	65	0	1	3	0
IA	BURLINGTON	56	36	67	26	46	15	0.09	-0.41	0.09	0.09	16	37.77	109	91	62	0	3	1	0
	CEDAR RAPIDS	55	31	67	20	43	16	0.19	-0.22	0.19	0.19	41	34.85	107	95	57	0	6	1	0
	DES MOINES	54	33	66	24	44	15	0.44	0.11	0.23	0.44	116	27.92	87	87	68	0	5	2	0
	DUBUQUE	52	32	64	22	42	16	0.31	-0.20	0.31	0.31	53	33.79	91	91	71	0	5	1	0
	SIOUX CITY	48	26	62	23	37	11	0.12	-0.07	0.08	0.12	55	30.22	119	91	75	0	6	3	0
	WATERLOO	53	30	67	19	41	16	0.22	-0.12	0.22	0.22	56	34.26	104	93	75	0	5	1	0
KS	CONCORDIA	59	32	68	26	46	13	0.00	-0.21	0.00	0.00	0	27.15	96	79	52	0	5	0	0
	DODGE CITY	62	32	71	23	47	12	0.00	-0.17	0.00	0.00	0	18.30	87	77	25	0	4	0	0
	GOODLAND	56	26	65	19	41	9	0.00	-0.11	0.00	0.00	0	16.40	92	72	33	0	7	0	0
	TOPEKA	65	34	73	26	49	15	0.00	-0.36	0.00	0.00	0	42.56	124	86	57	0	4	0	0

Based on 1961-90 normals

*** Not Available

Weather Data for the Week Ending December 8, 2001

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	65	36	73	26	51	15	0.02	-0.28	0.02	0.02	6	24.41	86	82	49	0	4	1	0
KY	JACKSON	65	46	76	37	56	15	0.82	-0.20	0.69	0.82	70	33.40	72	85	48	0	0	2	1
	LEXINGTON	61	42	72	32	52	13	0.83	-0.09	0.50	0.83	79	38.26	92	85	60	0	1	3	1
	LOUISVILLE	63	43	73	36	53	13	0.84	-0.03	0.48	0.84	84	42.24	101	95	58	0	0	3	0
	PADUCAH	63	45	70	32	54	14	1.36	0.26	0.70	1.36	108	47.68	104	95	62	0	1	3	2
LA	BATON ROUGE	75	53	77	45	64	9	0.00	-1.22	0.00	0.00	0	58.10	102	99	58	0	0	0	0
	LAKE CHARLES	74	56	79	49	65	9	0.10	-1.01	0.04	0.10	8	51.74	101	97	65	0	0	4	0
	NEW ORLEANS	74	55	78	49	65	8	0.00	-1.27	0.00	0.00	0	66.59	116	95	70	0	0	0	0
	SHREVEPORT	73	54	78	42	64	14	0.50	-0.46	0.47	0.50	45	53.76	125	99	59	0	0	2	0
ME	CARIBOU	40	28	56	14	34	14	0.13	-0.65	0.09	0.14	16	28.57	83	89	62	0	6	2	0
	PORTLAND	54	34	71	24	44	14	0.05	-1.06	0.05	0.08	6	31.26	76	84	56	0	4	1	0
MD	BALTIMORE	63	38	75	29	50	10	0.64	-0.13	0.64	0.65	74	33.24	87	85	42	0	3	1	1
MA	BOSTON	58	42	72	31	50	13	0.22	-0.72	0.21	0.22	21	28.81	75	76	39	0	1	2	0
	WORCESTER	53	38	67	27	45	14	0.19	-0.76	0.19	0.19	17	30.71	69	79	43	0	2	1	0
MI	ALPENA	51	29	65	19	40	13	0.87	0.39	0.84	0.87	158	26.48	97	92	58	0	5	3	1
	GRAND RAPIDS	53	38	69	29	45	15	0.20	-0.51	0.11	0.20	25	38.54	113	92	60	0	4	3	0
	HOUGHTON LAKE	50	32	64	20	41	15	0.14	-0.33	0.08	0.14	26	27.83	104	89	70	0	4	2	0
	LANSING	53	38	69	29	45	15	0.11	-0.47	0.05	0.14	21	30.87	107	87	71	0	4	3	0
	MUSKEGON	51	38	63	30	44	12	0.21	-0.51	0.17	0.21	26	33.79	111	90	71	0	4	2	0
	TRAVERSE CITY	49	33	63	23	41	12	0.81	0.31	0.71	0.89	156	30.66	109	94	60	0	3	2	1
MN	DULUTH	35	20	44	10	28	11	0.18	-0.12	0.16	0.18	51	29.62	102	93	83	0	7	2	0
	INT'L FALLS	31	13	38	3	22	10	0.21	0.02	0.21	0.22	100	27.51	116	91	77	0	7	1	0
	MINNEAPOLIS	45	29	63	20	37	15	0.19	-0.08	0.17	0.19	61	33.70	122	88	70	0	5	3	0
	ROCHESTER	46	29	61	15	37	15	0.86	0.59	0.81	0.87	281	38.54	133	94	79	0	5	3	1
	ST. CLOUD	39	20	50	13	29	10	0.08	-0.13	0.08	0.08	33	28.36	106	96	69	0	7	1	0
MS	JACKSON	74	49	78	41	62	12	0.04	-1.27	0.04	0.04	3	58.85	115	96	52	0	0	1	0
	MERIDIAN	74	46	76	39	60	9	0.03	-1.30	0.01	0.03	2	63.70	122	10	68	0	0	3	0
	TUPELO	68	47	72	38	58	12	0.70	-0.68	0.51	0.71	45	61.76	120	99	71	0	0	4	1
MO	COLUMBIA	62	41	69	28	51	16	0.00	-0.63	0.00	0.00	0	39.15	105	88	58	0	1	0	0
	KANSAS CITY	63	37	74	28	50	16	0.01	-0.38	0.01	0.01	2	52.74	145	91	53	0	2	1	0
	SAINT LOUIS	62	45	74	34	53	15	0.08	-0.68	0.08	0.08	9	31.92	90	86	66	0	0	1	0
	SPRINGFIELD	65	41	72	28	53	15	0.03	-0.78	0.03	0.03	3	41.79	102	85	64	0	2	1	0
MT	BILLINGS	43	27	49	20	35	7	0.00	-0.17	0.00	0.00	0	10.81	75	66	37	0	6	0	0
	BUTTE	34	15	43	7	25	5	0.01	-0.10	0.01	0.03	23	10.56	90	83	40	0	7	1	0
	GLASGOW	35	13	47	6	24	5	0.00	-0.08	0.00	0.00	0	12.69	119	87	71	0	7	0	0
	GREAT FALLS	42	27	53	16	34	7	0.00	-0.17	0.00	0.00	0	9.89	68	70	32	0	5	0	0
	HAVRE	39	13	53	2	26	5	0.00	-0.11	0.00	0.00	0	6.89	64	76	59	0	6	0	0
	KALISPELL	35	23	41	16	29	4	0.23	-0.15	0.10	0.24	56	12.22	80	84	70	0	7	4	0
	MISSOULA	36	25	41	20	31	6	0.13	-0.11	0.09	0.14	52	12.31	98	88	71	0	7	3	0
NE	GRAND ISLAND	54	27	61	21	40	11	0.03	-0.16	0.03	0.03	14	23.06	94	88	59	0	7	1	0
	LINCOLN	56	27	66	24	41	12	0.17	-0.05	0.17	0.17	65	32.07	116	84	63	0	7	1	0
	NORFOLK	50	27	59	24	38	12	0.01	-0.18	0.01	0.01	5	27.48	112	84	57	0	7	1	0
	NORTH PLATTE	48	19	55	13	33	6	0.00	-0.11	0.00	0.00	0	23.63	125	97	42	0	7	0	0
	OMAHA	54	29	66	24	41	12	0.35	0.09	0.35	0.35	117	28.14	97	91	75	0	6	1	0
	SCOTTSBLUFF	48	24	56	15	36	7	0.00	-0.14	0.00	0.00	0	13.04	88	81	47	0	7	0	0
	VALENTINE	43	23	46	17	33	8	0.00	-0.10	0.00	0.00	0	20.58	115	87	59	0	7	0	0
NV	ELY	38	12	45	2	25	-3	0.09	-0.08	0.09	0.09	47	6.16	64	80	60	0	7	1	0
	LAS VEGAS	59	40	64	34	50	2	0.00	-0.08	0.00	0.00	0	3.86	101	51	36	0	0	0	0
	RENO	46	28	54	21	37	3	1.19	0.97	1.19	1.19	476	3.75	55	83	61	0	6	1	1
	WINNEMUCCA	46	27	53	18	37	5	0.16	-0.06	0.16	0.18	72	4.18	55	79	59	0	6	1	0
NH	CONCORD	54	28	72	20	41	13	0.10	-0.67	0.08	0.14	16	29.10	85	93	44	0	5	3	0
NJ	NEWARK	62	44	74	37	53	14	0.72	-0.09	0.68	0.72	77	29.95	72	88	56	0	0	2	1
NM	ALBUQUERQUE	52	28	60	25	40	3	0.00	-0.11	0.00	0.00	0	6.29	74	60	27	0	6	0	0
NY	ALBANY	54	33	68	25	43	13	0.31	-0.39	0.29	0.31	38	27.12	80	80	51	0	5	3	0
	BINGHAMTON	52	36	62	28	44	14	0.37	-0.35	0.36	0.37	45	32.37	93	87	55	0	3	2	0
	BUFFALO	54	37	67	28	46	13	0.05	-0.83	0.04	0.06	6	28.74	80	92	51	0	2	2	0
	ROCHESTER	55	34	68	24	44	11	0.14	-0.52	0.14	0.14	18	27.61	92	86	52	0	5	1	0
	SYRACUSE	57	34	72	25	46	14	0.17	-0.62	0.12	0.17	19	32.32	88	87	47	0	3	3	0
NC	ASHEVILLE	68	38	71	30	53	11	0.01	-0.81	0.01	0.01	1	32.15	71	97	61	0	3	1	0
	CHARLOTTE	71	42	75	30	57	12	0.00	-0.77	0.00	0.00	0	24.28	60	96	45	0	1	0	0
	GREENSBORO	69	42	74	34	56	13	0.01	-0.73	0.01	0.01	1	27.65	69	92	44	0	0	1	0
	HATTERAS	68	57	73	52	62	11	0.20	-0.81	0.16	0.20	17	27.33	52	94	72	0	0	4	0
	RALEIGH	71	41	76	30	56	11	0.00	-0.72	0.00	0.01	1	32.98	85	92	45	0	1	0	0
	WILMINGTON	75	47	79	40	61	10	0.00	-0.78	0.00	0.00	0	36.69	71	98	45	0	0	0	0
ND	BISMARCK	40	14	51	5	27	9	0.06	-0.05	0.06	0.06	46	21.29	141	89	73	0	7	1	0
	DICKINSON	38	15	54	4	27	7	0.12	0.04	0.12	0.12	133	18.51	117	91	53	0	7	1	0
	FARGO	31	16	42	7	24	8	0.00	-0.14	0.00	0.00	0	20.11	106	91	74	0	7	0	0
	GRAND FORKS	27	11	37	2	19	4	0.08	-0.06	0.08	0.08	50	21.40	120	95	77	0	7	1	0
	JAMESTOWN	30	13	40	6	21	4	0.05	-0.06	0.05	0.05	38	20.16	122	95	74	0	7	1	0
	WILLISTON	31	3	50	-11	17	0	0.60	0.48	0.51	0.60	462	13.74	104	89	75	0	7	2	1
OH	AKRON-CANTON	55	40	69	31	48	14	0.16	-0.55	0.12	0.16	20	30.72	89	90	64	0	1	4	0
	CINCINNATI	59	42	70	34	50	13	0.78	0.02	0.54	0.78	90	43.29	111	87	67	0	0	3	1
	CLEVELAND	57	43	71	35	50	15	0.01	-0.73	0.01	0.01	1	31.84	93	89	61	0	0	1	0
	COLUMBUS	57	43	70	33	50	15	0.34	-0.36	0.28	0.34	43	34.19	95	86	64	0	0	2	0
	DAYTON	56	43	68	33	50	15	0.29	-0.42	0.28	0.29	36	38.85	113	88	64	0	0	2	0
	MANSFIELD	56	42	68	33	49	16	0.03	-0.74	0.02	0.03	3	31.50	84	88	52	0	0	2	0

Based on 1961-90 normals

*** Not Available

Weather Data for the Week Ending December 8, 2001

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	57	41	70	28	49	18	0.04	-0.68	0.02	0.04	5	31.94	103	90	66	0	1	3	0
	YOUNGSTOWN	57	40	71	32	49	16	0.07	-0.64	0.05	0.07	9	27.45	78	84	62	0	2	3	0
OK	OKLAHOMA CITY	64	43	73	32	53	11	0.02	-0.33	0.02	0.02	5	28.18	87	87	52	0	1	1	0
	TULSA	67	45	76	34	56	14	0.00	-0.56	0.00	0.00	0	26.98	69	83	60	0	0	0	0
OR	ASTORIA	49	38	52	33	44	0	2.19	-0.21	0.67	3.38	123	52.44	90	97	83	0	0	6	1
	BURNS	35	14	41	3	24	-3	0.32	0.04	0.24	0.40	129	7.76	85	90	80	0	7	4	0
	EUGENE	49	38	52	35	44	2	1.38	-0.60	0.68	2.58	114	23.88	55	93	87	0	0	7	1
	MEDFORD	45	34	55	32	39	0	1.15	0.38	0.67	1.69	192	12.36	75	99	81	0	3	6	1
	PENDLETON	48	34	54	30	41	5	0.17	-0.22	0.08	0.17	39	9.89	91	82	58	0	2	3	0
	PORTLAND	47	38	51	35	43	1	1.54	0.16	0.55	2.59	164	26.46	83	97	89	0	0	7	1
	SALEM	48	39	54	32	43	2	2.18	0.61	0.87	3.63	203	29.33	86	96	87	0	1	6	1
PA	ALLENTOWN	58	34	70	25	46	11	0.01	-0.82	0.01	0.01	1	34.09	83	92	54	0	4	1	0
	ERIE	57	41	72	32	49	14	0.05	-0.84	0.04	0.05	5	30.03	77	81	63	0	1	2	0
	MIDDLETOWN	59	38	73	31	49	12	0.60	-0.17	0.54	0.60	68	24.49	64	97	56	0	1	4	1
	PHILADELPHIA	62	43	72	35	53	14	0.67	-0.10	0.67	0.67	76	29.59	76	84	50	0	0	1	1
	PITTSBURGH	59	41	73	32	50	15	0.34	-0.32	0.26	0.34	45	33.64	97	85	42	0	1	2	0
	WILKES-BARRE	56	37	67	28	46	13	0.36	-0.26	0.35	0.36	51	26.73	78	89	47	0	3	2	0
	WILLIAMSPORT	55	34	66	29	44	10	0.63	-0.12	0.61	0.63	73	34.12	89	96	56	0	5	3	1
RI	PROVIDENCE	58	39	72	31	49	13	0.12	-0.90	0.12	0.12	10	37.77	89	91	48	0	2	1	0
SC	BEAUFORT	74	51	78	45	62	8	0.04	-0.61	0.04	0.04	5	43.17	88	10	59	0	0	1	0
	CHARLESTON	75	51	80	46	63	10	0.00	-0.66	0.00	0.00	0	38.31	78	98	58	0	0	0	0
	COLUMBIA	74	44	79	32	59	10	0.00	-0.73	0.00	0.01	1	26.80	57	91	46	0	1	0	0
	GREENVILLE	70	45	73	35	57	11	0.00	-0.91	0.00	0.00	0	38.15	79	92	46	0	0	0	0
SD	ABERDEEN	33	11	38	3	22	2	0.00	-0.11	0.00	0.00	0	22.56	124	92	79	0	7	0	0
	HURON	37	19	42	14	28	6	0.00	-0.11	0.00	0.00	0	26.74	135	92	70	0	7	0	0
	RAPID CITY	48	25	60	17	37	10	0.00	-0.11	0.00	0.00	0	14.45	89	74	31	0	7	0	0
	SIOUX FALLS	41	21	50	14	31	9	0.02	-0.17	0.02	0.02	10	30.10	129	88	73	0	7	1	0
TN	BRISTOL	66	38	74	28	52	11	0.44	-0.31	0.25	0.44	52	38.79	102	97	48	0	3	2	0
	CHATTANOOGA	69	44	73	35	56	12	0.08	-1.08	0.06	0.08	6	49.99	101	94	57	0	0	2	0
	KNOXVILLE	66	44	71	35	55	12	0.60	-0.40	0.32	0.60	52	38.45	88	97	58	0	0	2	0
	MEMPHIS	69	51	76	39	60	14	0.76	-0.61	0.37	0.76	49	56.56	118	90	58	0	0	3	0
	NASHVILLE	67	45	72	32	56	13	1.25	0.18	0.71	1.25	102	46.85	107	95	58	0	1	3	1
TX	ABILENE	68	50	74	32	59	11	0.00	-0.25	0.00	0.00	0	20.88	88	80	51	0	1	0	0
	AMARILLO	63	35	72	26	49	10	0.00	-0.11	0.00	0.00	0	18.44	96	74	28	0	3	0	0
	AUSTIN	72	58	79	46	65	11	2.27	1.82	1.38	2.31	444	37.11	122	98	85	0	0	5	2
	BEAUMONT	73	59	78	52	66	10	0.24	-0.83	0.18	0.24	20	67.01	125	99	75	0	0	5	0
	BROWNSVILLE	81	64	84	51	73	9	0.53	0.25	0.41	0.85	274	16.68	65	98	75	0	0	6	0
	CORPUS CHRISTI	76	63	80	50	70	10	1.32	1.04	0.70	1.37	442	39.14	134	10	83	0	0	4	2
	DEL RIO	70	59	75	44	64	10	0.15	0.00	0.06	0.17	100	9.43	53	89	79	0	0	3	0
	EL PASO	62	34	72	29	48	2	0.00	-0.13	0.00	0.00	0	4.17	50	56	23	0	3	0	0
	FORT WORTH	70	55	76	38	63	13	0.53	0.09	0.51	0.53	106	35.41	109	90	56	0	0	2	1
	GALVESTON	73	63	77	54	68	9	0.36	-0.44	0.31	0.36	40	56.47	142	10	81	0	0	3	0
	HOUSTON	73	60	81	49	67	11	1.23	0.43	0.70	1.24	136	66.29	152	10	79	0	0	3	2
	LUBBOCK	64	39	68	28	52	9	0.00	-0.14	0.00	0.00	0	15.50	85	81	46	0	1	0	0
	MIDLAND	65	42	68	30	53	6	0.00	-0.14	0.00	0.00	0	9.96	68	85	46	0	1	0	0
	SAN ANGELO	67	50	73	32	59	10	0.00	-0.19	0.00	0.00	0	18.41	93	82	62	0	1	0	0
	SAN ANTONIO	72	60	79	43	66	11	1.75	1.36	0.92	1.86	413	35.17	118	97	77	0	0	5	2
	VICTORIA	75	61	80	48	68	10	2.39	1.92	2.00	2.51	465	41.78	116	99	82	0	0	5	1
	WACO	70	58	76	41	64	13	0.43	-0.02	0.36	0.43	83	32.09	105	91	83	0	0	5	0
	WICHITA FALLS	67	46	76	35	57	12	0.00	-0.30	0.00	0.00	0	16.88	60	75	42	0	0	0	0
UT	SALT LAKE CITY	43	29	49	22	36	4	0.57	0.24	0.26	0.57	150	14.14	93	86	55	0	5	5	0
VT	BURLINGTON	50	36	64	23	43	16	0.26	-0.35	0.17	0.26	37	22.26	68	76	53	0	2	2	0
VA	LYNCHBURG	65	37	76	26	51	10	0.24	-0.50	0.24	0.25	29	29.56	77	90	50	0	3	1	0
	NORFOLK	65	46	74	39	56	10	0.00	-0.68	0.00	0.00	0	31.53	75	91	58	0	0	0	0
	RICHMOND	66	43	78	34	55	12	0.06	-0.66	0.04	0.06	7	29.92	73	89	54	0	0	2	0
	ROANOKE	66	41	76	30	54	13	0.26	-0.43	0.25	0.26	33	22.89	59	73	40	0	1	2	0
	WASH/DULLES	63	37	77	26	50	12	0.51	-0.23	0.51	0.52	61	35.96	95	87	49	0	3	1	1
WA	OLYMPIA	45	33	48	30	39	0	2.44	0.59	0.55	4.03	191	42.56	95	97	89	0	4	7	2
	QUILLAYUTE	44	33	48	28	39	-2	3.74	0.22	1.43	5.66	141	85.68	91	98	86	0	4	6	2
	SEATTLE-TACOMA	45	37	50	35	41	-1	1.08	-0.28	0.31	1.47	94	33.12	101	93	88	0	0	6	0
	SPOKANE	36	26	42	24	31	1	0.53	-0.02	0.17	0.67	106	12.34	84	96	75	0	7	5	0
	YAKIMA	41	25	44	19	33	1	0.63	0.33	0.43	0.75	214	6.47	94	93	76	0	7	4	0
WV	BECKLEY	62	41	73	31	51	14	0.59	-0.14	0.57	0.59	71	34.13	88	77	56	0	1	3	1
	CHARLESTON	63	39	77	28	51	11	1.14	0.34	0.80	1.14	125	40.46	101	94	48	0	2	3	1
	ELKINS	61	29	74	19	45	10	0.65	-0.15	0.53	0.65	71	38.06	90	98	45	0	3	3	1
	HUNTINGTON	62	40	76	29	51	11	0.93	0.16	0.67	0.93	106	33.77	87	93	54	0	1	3	1
WI	EAU CLAIRE	46	27	64	16	37	16	0.54	0.27	0.51	0.54	174	35.79	116	96	59	0	5	2	1
	GREEN BAY	48	32	64	24	40	16	0.52	0.13	0.52	0.53	118	26.97	97	94	72	0	3	1	1
	LA CROSSE	50	31	64	21	41	16	0.39	0.07	0.39	0.40	108	31.78	107	95	62	0	5	1	0
	MADISON	51	34	64	25	43	17	0.19	-0.27	0.19	0.19	36	37.57	127	89	68	0	4	1	0
	MILWAUKEE	52	37	68	28	45	17	0.24	-0.33	0.22	0.25	38	35.69	114	88	68	0	2	2	0
WY	CASPER	41	23	49	15	32	6	0.00	-0.17	0.00	0.00	0	6.68	55	70	49	0	7	0	0
	CHEYENNE	45	22	59	14	34	4	0.01	-0.10	0.01	0.01	8	13.11	93	54	34	0	7	1	0
	LANDER	38	20	45	13	29	6	0.04	-0.10	0.03	0.04	25	5.24	42	72	47	0	7	2	0
	SHERIDAN	46	22	56	19	34	9	0.00	-0.17	0.00	0.00	0	11.08	79	66	41	0	7	0	0

Based on 1961-90 normals

*** Not Available

NOTE: These data are preliminary and subject to change. In the past, precipitation totals from a number of stations were incomplete.

November Weather and Crop Summary

Weather

Weather summary provided by USDA/WAOB

Mid- to late-November storm systems erased autumn dryness across the southern Plains and upper Midwest, but largely bypassed winter wheat areas in Montana and the east-central Plains, including portions of Kansas and Oklahoma. Mostly dry weather also persisted in the East, hampering winter grain development and contributing to wildfire activity. In contrast, heavy rain and strong thunderstorms struck areas from the western Gulf Coast region to the lower Ohio Valley, including the Delta, flooding fields, halting fieldwork, and causing localized wind damage. Meanwhile in the West, a series of storms boosted topsoil moisture for winter grains and blanketed high-elevation areas with heavy snow. Although the precipitation eased long-term drought across northern California, the Great Basin, and the Northwest, reservoir supplies remained limited due to previously dry conditions dating to the spring of 2000. Cold weather was confined to the western half of the Nation toward month's end, boosting November temperatures at least 10°F above normal in the upper Midwest. In fact, more than two dozen cities from the western Corn Belt to the northern Mid-Atlantic region set November average-temperature records.

The parade of storms began in mid-November with a slow-moving system that soaked much of Texas and eastern New Mexico. On the 15th, rainfall totaled 8.68 inches in Austin (Bergstrom), TX, their highest single-day amount since 8.70 inches fell on November 23, 1974. Nearby Austin (Mabry) recorded 7.55 inches, a record for any November day and their highest 1-day total since 15.00 inches fell on September 9, 1921. Elsewhere in Texas, November rainfall was the highest on record in Lubbock (3.45 inches, or 460 percent [%] of normal).

Farther north, back-to-back storms struck the upper Midwest on November 23-24 (mostly rain) and 26-27 (mostly snow). Daily-record rainfall totals on November 23 included 1.92 inches in Sioux Falls, SD, a record 1-day sum for November, and 1.24 inches in Kearney, NE. Sioux Falls received 3.20 inches on November 23-24 and 1.44 inches on November 26-27, easily surpassing their November precipitation record (formerly 3.66 inches in 1919) and exceeding their 2.94-inch normal for all of November, December, January, and February. Meanwhile in Sioux City, IA, where 2.40 inches fell on November 23-24, the rain snapped a 40-day spell without measurable precipitation.

The November 23-24 storm also contributed to a rash of severe weather across the South. During the 24 hours beginning the evening of November 23, seven tornadoes claimed at least 11 lives from Arkansas to Alabama, the Nation's first November tornado fatalities since 1996. At least 21 tornadoes struck northern and central Alabama alone, including an F3 twister (winds estimated at 158 to 206 mph) that carved a 38-mile path across Lamar, Fayette, and Walker Counties. According to preliminary reports from the Storm Prediction Center, there were 57 tornadoes nationwide during November. If that number stands in the final analysis, it would represent the highest November total since 1995.

The second Midwestern storm left 30.4 inches of snow in Willmar, MN, on November 26-27, just shy of the station's storm-total snowfall record of 30.7 inches, set in November-December 1985. Elsewhere in the upper Midwest, late-November snowfall totaled 15.0 inches in Mitchell, SD, and 11.8 inches in St. Cloud, MN. Heavy snow also blanketed the upper Great Lakes region, where Marquette, MI, measured 33.1 inches. Marquette's total included their snowiest November day on record—19.2 inches on the 27th.

Despite the late-month snow, temperatures remained above normal in most upper Midwestern and Great Lakes locations. For example, November 30 marked the 34th consecutive day with above-normal temperatures in Minneapolis. In fact, a number of locations not only experienced their warmest November on record, but also averaged at least 10°F above normal and exceeded their previous record by 2°F or more.

Highest November Average Temperature (°F), November Temperatures at Least 10°F Above Normal, and Eclipsed Previous November Record by at Least 2°F

Location	Avg.	Dep.	Previous Record/Year
Des Moines, IA	49.8	+10.8	47.4 in 1999
Moline, IL	49.8	+10.2	47.4 in 1931
Waterloo, IA	47.9	+12.2	43.7 in 1931
LaCrosse, WI	47.5	+11.9	43.2 in 1931
Minneapolis, MN	46.4	+13.2	41.8 in 1999
Rochester, MN	45.4	+12.8	40.4 in 1913
Mason City, IA	45.4	+11.4	41.5 in 1913 and 1999
St. Cloud, MN	41.8	+12.8	39.5 in 1899
Ironwood, MI	40.9	+10.7	38.8 in 1931
Marquette, MI	39.9	+10.4	37.2 in 1999
Int'l Falls, MN	36.9	+12.0	34.9 in 1981

Farther to the south and east, several locations in the Great Lakes States completed their least snowy November on record. In southeastern Minnesota, Rochester concluded their first autumn (September-November) on record without measurable snowfall. Rochester finally received 0.6 inch on December 7, easily surpassing the date—November 29, 1960—of their previous latest first snowfall. Farther east, not even a flake of snow was observed in Buffalo, NY, in stark contrast to last year's November-record total of 45.6 inches.

Record-Low November Snowfall (Inches)

Location	Total	Normal	Previous Record/Year
Buffalo, NY	0.0	10.4	trace in 1899, 1918, & 1946
South Bend, IN	0.0	8.6	trace in 1990, 1994, & 1998
Lansing, MI	0.0	4.8	trace in 1963 and 1973
Fort Wayne, IN	0.0	3.2	0.0 in 1946 and 1998
Milwaukee, WI	0.0	2.8	0.0 in 1999
Toledo, OH	0.0	3.0	0.0 in 1998
Mansfield, OH	0.0	2.4	trace in 1998 and earlier
Erie, PA	trace	9.2	trace in 1987 and earlier
Gr. Rapids, MI	trace	7.2	trace in 1948 and earlier
Binghamton, NY	trace	7.5	trace in 1964
Cleveland, OH	trace	4.2	trace in 1994 and earlier
Madison, WI	trace	3.4	trace in 1999 and earlier

Stormy weather returned to the southern Plains on November 27-28, producing local snowfall in excess of 10 inches in Texas from near Midland to just southwest of Wichita Falls. Midland's snowfall reached 8.0 inches, their second-highest 24-hour total on record. Elsewhere, storm-total snowfall included 6.3 inches in Wichita Falls and 5.2 inches in Oklahoma City, OK. Farther east, torrential rainfall developed from the western Gulf Coast region to the lower Ohio Valley. In the Mississippi Delta, Stoneville experienced their wettest 3- and 4-day periods on record, netting 10.14 inches from November 27-29 and 11.19 inches from November 27-30. Memphis, TN, received 5.86 inches on November 28, their sixth-highest daily amount on record. In western Tennessee, monthly rainfall of 11.61 inches (228% of normal) in Memphis and 10.31 inches (215%) in Jackson were the stations' highest November totals since 1934 and 1948, respectively.

In contrast, extremely dry weather prevailed in the East Coast States. November precipitation was the lowest on record in locations such as Norfolk, VA (0.08 inch), Greensboro, NC (0.34 inch), and Blacksburg, VA (0.41 inch). It was the driest November since 1890 in Richmond, VA, where only 0.17 inch fell. In the Delaware River Basin, which supplies roughly half of New York City's water, the daily storage fell to 66.4 billion gallons (40% of the November 30 average) at month's end, down 31.2 billion gallons from November 1. Meanwhile, streamflow into the Chesapeake Bay averaged a November-record low of 9.3 billion gallons per day (75% below the long-term average), edging the standard set in 1964. In parts of the Mid-Atlantic region, where September-November precipitation totaled 2.65 inches (28% of normal) in Washington, DC, and 3.21 inches (33%) in Baltimore, MD, it was the driest autumn since 1941.

Farther south, the center of weakening Hurricane Michelle passed less than 200 miles southeast of Miami, FL, on November 5. Southern Florida's peak wind gusts included 47 mph at Ft. Lauderdale and Key West, and 51 mph at Miami Beach. Storm-total rainfall reached 2.56 inches in Key West. Toward midmonth, locally heavy showers developed across east-central Florida, totaling 4.04 inches in Melbourne and 6.17 inches in Daytona Beach from November 12-15. However, on the other side of the Florida peninsula, Tampa's monthly total of 0.10 inch (6% of normal) was their lowest November sum since 1978. After the Atlantic hurricane season ended on November 30, the National Hurricane Center announced that for the first time since 1981-82, the U.S. mainland missed a landfalling hurricane for 2 consecutive years. Since Hurricane Irene struck southern Florida in October 1999, the mainland has escaped direct strikes from 19 consecutive hurricanes.

In the West, a barrage of storm systems moved ashore after November 10. Relative to normal, precipitation was most significant north of a line from central California to northern Utah. Monthly precipitation totals included 3.34 inches (259% of normal), a November record, in Salt Lake City, UT, and 13.30 inches (166%) in Olympia, WA. Nearly 90% (2.97 inches) of Salt Lake City's precipitation fell during the last 9 days of the month. In the nearby Wasatch Range, monthly snowfall totaled 137 inches in Alta and 115 inches at Snowbird, nearly all of which fell on November 22-23, 24-27, and 29-30. Farther west, the Sierra Nevada snow pack gained an average of 5 inches of liquid equivalent during the last 3 weeks of the month, according to the California Department of Water Resources.

With the prevalence of warm November weather nearly nationwide, many locations set various temperature records. For example, high temperatures reached or exceeded 60°F on 17 days in Rapid City, SD, and 12 days in Rochester, MN, breaking November records that had last been attained in 1999 and 1975, respectively. Similarly, highs peaked at 70°F or above on 4 days in LaCrosse, WI, breaking their record of 3 days, set in 1953, 1991, and 1999.

Trade winds, including the embedded remnants of Hurricane Octave, brought locally heavy showers to Hawaii in early November. Thereafter, only light showers fell until the late-month development of a strong, cut-off storm system—known locally as a "kona low"—west of Kauai. The storm eased long-term drought but caused widespread flash flooding during a 48-hour period from November 26-28, when rainfall on the Big Island reached 22.48 inches at Kapapala Ranch, 18.93 inches in Pahala, and 16.31 inches in Glenwood. Maximum reported 48-hour totals on other islands included 8.83 inches in Kokee, Kauai; 6.05 inches in Maunawili, Oahu; 6.61 inches in Mahinahina, Maui; and 5.33 inches in Lanai City, Lanai. Monthly totals reached 27.38 inches (154% of normal) in Glenwood and 23.60 inches (291%) at Kapapala Ranch. In Honolulu, Oahu, where 3.24 inches fell on November 27, the daily total exceeded every monthly rainfall since March 1997, when 4.90 inches fell. Meanwhile in Alaska, temperatures returned to above-normal levels after midmonth, following a 6-week cold snap. Nome warmed to a daily-record high of 41°F on November 19, up from a low of -7°F on November 11. Below-normal precipitation was reported nearly statewide. In fact, only 0.06 inch (8% of normal) fell in Fairbanks, their driest November since 1953. It was the second-driest November on record in locations such as King Salmon (0.14 inch) and Nome (0.04 inch).

Fieldwork

Fieldwork summary provided by USDA/NASS

The end of the harvest season quickly approached, as dry weather aided progress across most of the Nation during the first half of the month. Seeding of winter wheat and other winter crops also neared completion before midmonth, although abnormally dry soils hindered planting along the Atlantic Coastal Plain. Moisture shortages increased across most of the Great Plains, but a midmonth storm provided beneficial moisture for developing winter crops across much of the southern Great Plains. Scattered light precipitation periodically boosted moisture supplies in parts of the Pacific Northwest and Southwest and prevented winter wheat deterioration on the central High Plains. However, moisture shortages increased crop stress in the southern High Plains, northern Great Plains, and along the Atlantic Coastal Plain. Warm weather and adequate topsoil moisture supplies supported winter grain development in the Corn Belt. Warm weather stimulated root development and growth of winter grains and forages where adequate moisture supplies were available. Rain halted cotton harvest and other fieldwork in the Southeast late in the month, but the precipitation provided critical moisture for germinating and establishing winter wheat along the Atlantic Coastal Plain.

Winter wheat seeding progressed about 1 week ahead of last year's slow pace and slightly ahead of the 5-year average. Seeding progressed with only a few rain interruptions, but dry soils limited planting in parts of the southern Great Plains. Planting was also active in the lower Mississippi Valley, Atlantic Coastal Plain, and California. In North Carolina, planting progressed ahead of normal, despite topsoil moisture shortages. By November 11, planting was virtually complete in the Great Plains and rapidly approaching completion in the Corn Belt. Temperatures were favorable for development across most of the Nation during November, but emergence and growth were spotty and uneven due to topsoil moisture shortages, especially in Kansas, North Carolina, and Oklahoma. Ample moisture aided development across most of the Corn Belt. Occasional light showers prevented serious crop deterioration on the central High Plains and in the Pacific Northwest. Heavy rain boosted soil moisture reserves and promoted emergence and growth in the southern Great Plains near midmonth. However, the precipitation varied from light, soaking showers across most of Oklahoma and eastern Texas, to persistent downpours that flooded streams and low-lying areas in central and northern Texas. Fields in California and the interior Pacific Northwest received beneficial precipitation after midmonth, but moisture reserves remained low in Idaho, Oregon, and Washington. Along the Atlantic Coastal Plain, fields received critical moisture for germination and root development near the end of the month.

Dry weather supported the corn harvest across most of the Corn Belt and Great Plains. Growers in Iowa, Minnesota, and Ohio picked about one-fourth of their crop during the week ending November 4. Harvest was also very active in the Dakotas early in the month. In the central Corn Belt and Great Lakes region, harvesting accelerated after excess moisture from late-October's

heavy rains drained from fields. However, progress remained behind the 5-year average in Indiana, Michigan, and Wisconsin until midmonth. Growers in Kansas, North Carolina, Tennessee, and Texas completed their harvest before midmonth. By November 18, harvest was 97% complete and was on pace with last year's early finish.

The soybean harvest was aided by warm, dry weather in the Corn Belt, lower Mississippi Valley, and Atlantic Coastal Plain during the first half of the month. By November 11, harvest was 96% complete, compared with 97% on the same date last year and the average of 95%. Harvesting was most active in the Ohio and Missouri River Valleys, where about one-fifth of the Kentucky, Missouri, and Tennessee acreage was reaped during the week that ended November 4. Harvest progressed behind normal in many parts of the Corn Belt, especially around the Great Lakes. Progress lagged far behind normal in Michigan and well behind normal in Indiana and Wisconsin. Meanwhile, harvest progressed far ahead of normal on the Atlantic Coastal Plain. Harvest neared completion several days earlier than normal in Arkansas and Kentucky. The harvest season ended in Nebraska and the Dakotas by November 11, and very few fields remained unharvested in Iowa, Kansas, and Minnesota.

Cotton picking progressed slightly ahead of normal throughout the month, as picking steadily advanced in most areas. However, widespread, persistent rain suspended progress in the southern Great Plains for several days near midmonth. Elsewhere, dry weather aided harvest throughout the Southeast during most of the month. In Georgia, North Carolina, and Virginia, harvest progressed well ahead of the 5-year average. South Carolina's harvest lagged behind normal at the beginning of the month, but exceeded the 5-year average by the end of the month. Meanwhile, harvest progressed behind normal in Alabama. In the lower Mississippi Valley, harvest was virtually complete on November 25. In the Southwest, harvest was aided by dry weather most of the month, although rain occasionally interrupted progress in California. Picking continued without interruption in Arizona.

The sorghum harvest progressed with few rain delays in the Great Plains and Corn Belt. As the month began, harvest was most active in Nebraska. Harvesting neared completion well ahead of normal in Illinois and Kansas and progressed far ahead of normal in Colorado and New Mexico. As midmonth approached, harvest neared completion in the central and northern Great Plains but remained active on the High Plains, especially in New Mexico and Oklahoma.

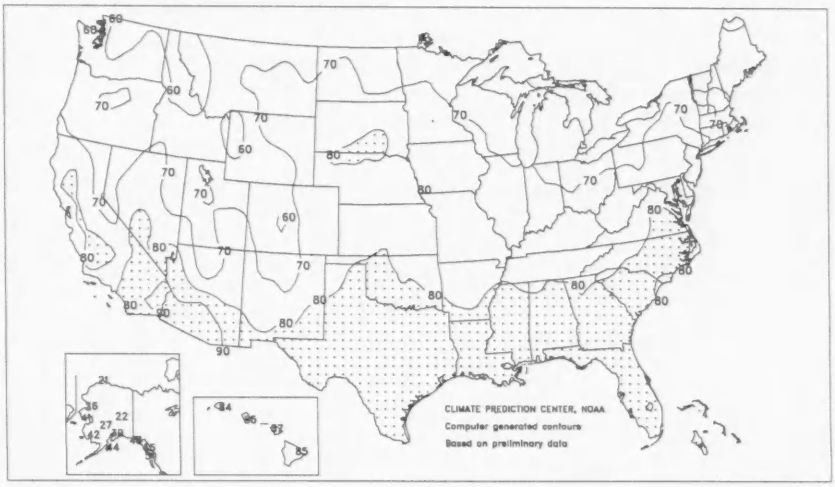
Warm, dry weather aided the peanut harvest in the southern Great Plains early in the month. However, heavy rain slowed progress for several days near midmonth, especially in Texas. Along the Atlantic Coastal Plain, harvest was virtually complete by November 11. In Alabama, digging lagged throughout the month.

The sugar beet harvest neared completion early in the month and was virtually complete by midmonth. In Michigan, about one-third of the acreage was harvested during the week ending November 4, as digging rapidly accelerated when warm, dry weather replaced October's excessive wetness. Michigan's dry weather pattern continued through midmonth, aiding efforts to finish the harvest. Dry weather also supported harvest in Idaho during the first half of the month.

The sunflower harvest continued with only minor rain delays in the four major sunflower-producing States. Harvest was most active in Colorado, where growers reaped more than one-fourth of their crop during the week ending November 4. Harvest was virtually complete in Kansas and the Dakotas by midmonth. Harvest neared completion well ahead of normal in North Dakota and slightly ahead of normal in South Dakota.

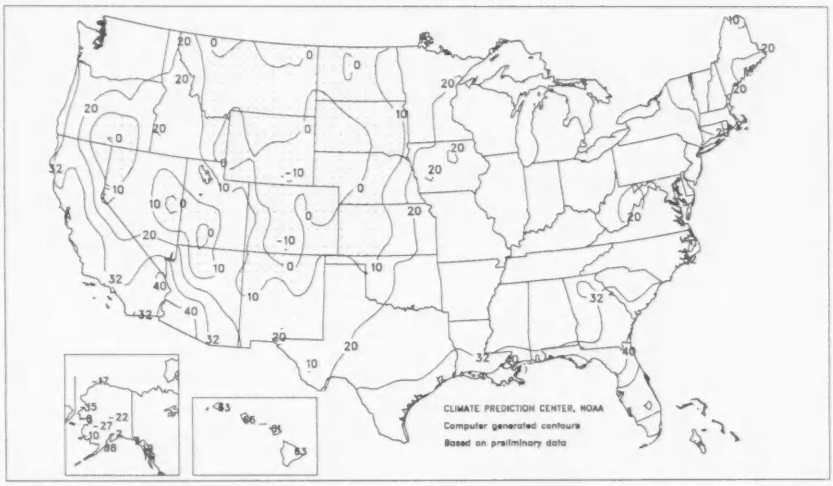
Extreme Maximum Temperature (°F)

November 2001



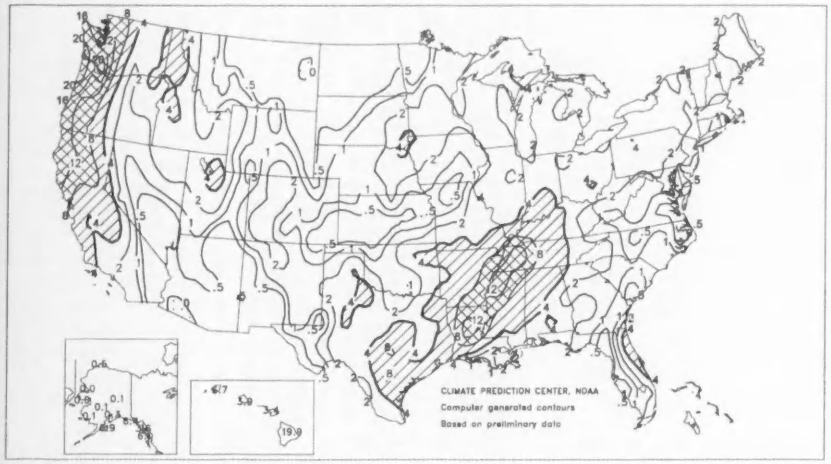
Extreme Minimum Temperature (°F)

November 2001



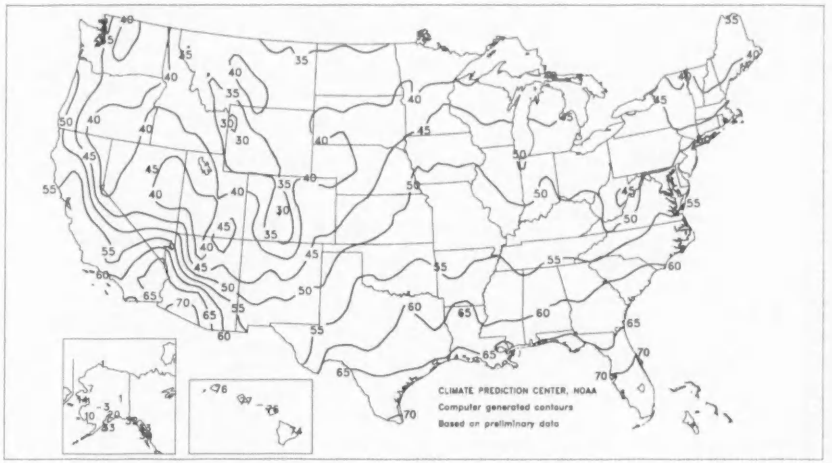
Total Precipitation (Inches)

November 2001



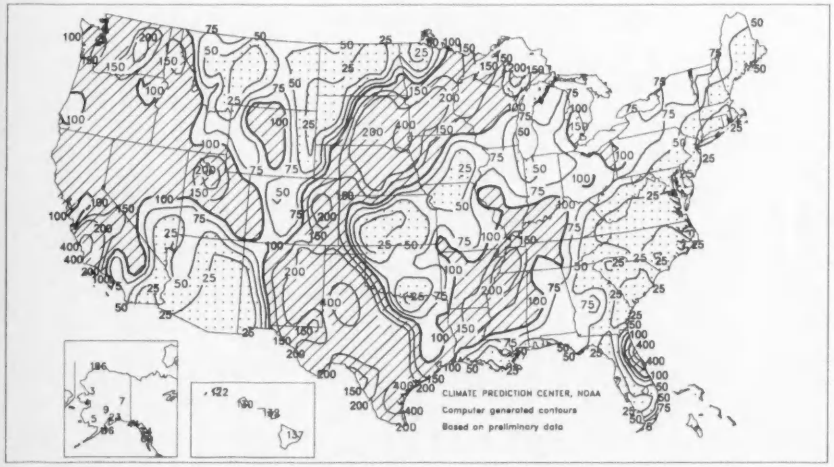
Average Temperature (°F)

November 2001



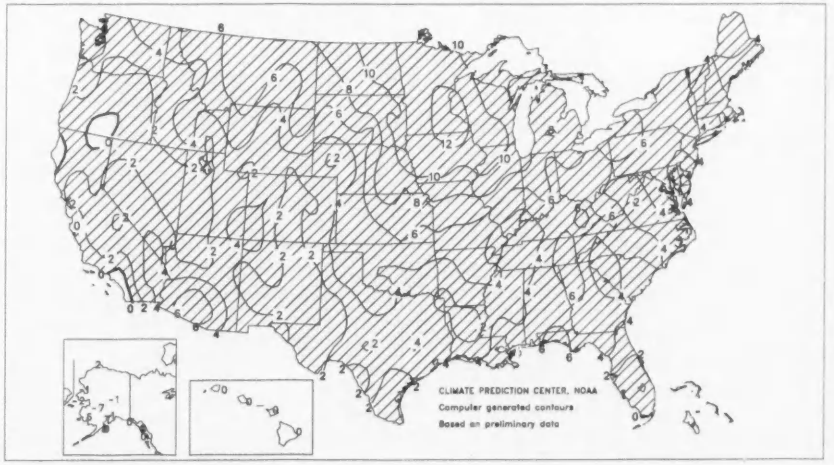
Percent Of Normal Precipitation

November 2001



Departure of Average Temperature from Normal (°F)

November 2001



TEMPERATURE AND PRECIPITATION SUMMARY
November 2001

STATES AND STATIONS	TEMP, °F		PRECIP.	
	AVERAGE	DEPARTURE	TOTAL	DEPARTURE
AL BIRMINGHAM	59	6	4.20	-0.13
HUNTSVILLE	57	6	3.53	-1.33
MOBILE	64	4	1.24	-2.86
MONTGOMERY	60	3	2.96	-1.12
AK ANCHORAGE	20	-1	0.26	-0.85
BARROW	1	3	0.46	0.21
COLD BAY	34	0	3.56	-0.63
FAIRBANKS	1	-2	0.06	-0.74
JUNEAU	33	1	3.62	-1.29
KING SALMON	19	-3	0.16	-1.32
KODIAK	33	-1	6.91	0.95
NOME	14	-2	0.04	-1.00
AZ FLAGSTAFF	39	2	0.27	-1.68
PHOENIX	68	6	0.20	-0.46
TUCSON	63	4	0.05	-0.62
AR FORT SMITH	56	5	1.97	-2.02
LITTLE ROCK	56	4	6.16	0.96
CA BAKERSFIELD	58	2	1.08	0.38
EUREKA	50	-2	7.71	1.27
FRESNO	56	2	1.99	0.62
LOS ANGELES	61	-1	1.35	-0.41
REDDING	53	1	7.22	2.01
SACRAMENTO	56	3	2.41	-0.31
SAN DIEGO	61	-1	0.99	-0.46
SAN FRANCISCO	57	2	4.52	1.66
STOCKTON	56	3	1.99	-0.18
CO ALAMOSA	31	1	0.26	-0.17
CO SPRINGS	41	3	0.37	-0.10
DENVER	41	2	0.72	-0.15
GRAND JUNCTION	44	4	1.06	0.35
PUEBLO	42	2	0.44	0.01
CT BRIDGEPORT	49	3	0.79	-3.02
HARTFORD	46	4	0.85	-3.19
DC WASHINGTON	55	5	0.55	-2.57
DE WILMINGTON	51	5	0.99	-2.28
FL DAYTONA BEACH	69	3	6.93	4.09
FT LAUDERDALE	74	1	2.90	-1.02
FT MYERS	71	0	0.42	-1.15
JACKSONVILLE	65	3	1.44	-0.75
KEY WEST	74	-2	2.82	-0.02
MELBOURNE	70	2	5.26	2.26
MIAMI	74	0	1.42	-1.24
ORLANDO	69	1	1.67	-0.63
PENSACOLA	66	5	1.76	-1.78
ST PETERSBURG	71	2	0.04	-2.10
TALLAHASSEE	63	3	2.11	-1.76
TAMPA	71	4	0.10	-1.67
WEST PALM BEACH	73	1	1.78	-2.91
GA ATHENS	58	5	0.65	-3.01
ATLANTA	60	7	0.93	-2.93
AUGUSTA	59	4	0.83	-1.65
COLUMBUS	63	6	2.00	-1.56
MACON	60	4	2.48	-0.25
SAVANNAH	63	4	0.16	-2.03
HI HILO	74	0	19.89	5.38
HONOLULU	77	0	3.91	0.91
KAHULUI	76	0	3.41	0.82
LIHUE	76	1	6.65	1.20
ID BOISE	44	4	1.52	0.04
LEWISTON	44	3	1.23	0.08
POCATELLO	38	2	0.73	-0.43
IL CHICAGO/O'HARE	48	8	1.22	-1.70
MOLINE	50	10	1.49	-1.02
PEORIA	50	9	1.90	-0.79
ROCKFORD	48	10	2.04	-0.53
SPRINGFIELD	50	7	2.61	0.08
IN EVANSVILLE	51	5	5.42	1.69
FORT WAYNE	47	6	1.18	-1.61
INDIANAPOLIS	49	6	2.69	-0.54
SOUTH BEND	48	7	1.72	-1.55
IA BURLINGTON	50	9	1.39	-0.94
CEDAR RAPIDS	48	10	0.93	-1.08
DES MOINES	50	11	1.01	-0.78
DUBUQUE	47	11	1.89	-0.82
SIOUX CITY	46	10	3.05	1.97
WATERLOO	48	12	0.78	-1.04
KS CONCORDIA	49	7	0.52	-0.61
DODGE CITY	48	5	0.14	-0.69
GOODLAND	43	4	0.88	0.19
HILL CITY	45	5	0.68	-0.06
TOPEKA	51	8	1.13	-0.80
WICHITA	51	6	0.65	-0.94
KY JACKSON	55	7	1.82	-2.38
LEXINGTON	52	6	3.30	-0.09
LONDON-CORBIN	51	5	2.28	-1.59
LOUISVILLE	53	6	5.16	1.46
PADUCAH	52	4	7.74	3.42
LA BATON ROUGE	63	3	0.58	-3.73
LAKE CHARLES	64	4	2.95	-1.31
NEW ORLEANS	65	4	2.54	-1.88
SHREVEPORT	60	3	4.16	-0.29
ME BANGOR	40	3	1.93	-2.62
CARIBOU	35	4	2.08	-1.47
PORTLAND	41	2	2.20	-2.97
MD BALTIMORE	51	4	1.01	-2.31
MA BOSTON	48	3	0.73	-3.49
WORCESTER	44	5	1.35	-3.14
MI ..LPENA	43	7	1.48	-0.72
DETROIT	47	7	2.35	-0.32
FLINT	47	8	3.14	0.54
GRAND RAPIDS	47	9	2.26	-1.06
HOUGHTON LAKE	42	7	1.92	-0.35
LANSING	46	8	2.25	-0.38
MUSKEGON	46	7	2.20	-0.95
TRAVERSE CITY	44	7	2.31	-0.13
MN DULUTH	40	12	2.21	0.41
INT'L FALLS	37	12	0.90	-0.25
MINNEAPOLIS	46	13	2.77	1.22
ROCHESTER	46	13	2.02	0.41
ST. CLOUD	42	12	2.83	1.56
MS JACKSON	60	4	6.33	1.52
MERIDIAN	59	4	6.43	1.94
TUPELO	56	3	6.24	1.39
MO COLUMBIA	51	7	1.61	-1.32
JOPLIN	54	7	3.99	0.69
KANSAS CITY	51	8	0.56	-1.36
SPRINGFIELD	51	5	2.43	-1.32
ST JOSEPH	50	8	0.62	-1.19
ST LOUIS	53	7	3.06	-0.22
MT BILLINGS	41	6	0.37	-0.47
BUTTE	33	5	0.55	0.02
GLASGOW	36	7	0.11	-0.17
GREAT FALLS	42	8	0.14	-0.52
HELENA	40	8	0.18	-0.30
KALISPELL	35	4	0.75	-0.55
MILES CITY	37	5	0.13	0.41
MISSOULA	36	4	0.44	-0.37
NE GRAND ISLAND	47	9	1.55	0.51
HASTINGS	47	10	1.57	0.59
LINCOLN	48	9	1.73	0.46
MCCOOK	45	7	0.97	0.12
NORFOLK	46	10	2.94	1.93
NORTH PLATTE	39	4	0.97	0.31
OMAHA/EPPLEY	49	10	1.55	0.06
SCOTTSBLUFF	39	3	0.14	-0.48
VALENTINE	40	6	1.57	0.97
NV ELKO	37	1	1.62	0.51
ELY	35	1	0.79	0.12
LAS VEGAS	59	4	0.09	-0.34
RENO	45	5	0.83	-0.04
WINNEMUCCA	39	1	0.94	0.00
NH CONCORD	41	4	1.11	-2.55
NJ ATLANTIC CITY	49	3	1.06	-2.52
NEWARK	52	5	0.84	-3.07
NM ALBUQUERQUE	48	4	0.68	0.25
NY ALBANY	45	5	1.36	-1.87
BINGHAMTON	44	6	1.84	-1.44
BUFFALO	47	7	3.35	-0.48
ROCHESTER	47	7	1.90	-1.02
SYRACUSE	47	7	2.93	-0.79
NC ASHEVILLE	52	5	1.42	-2.17
CHARLOTTE	56	4	0.83	-2.40
GREENSBORO	55	6	0.35	-2.62
HATTERAS	60	3	1.15	-3.82
RALEIGH	56	5	0.50	-2.48
WILMINGTON	60	3	0.95	-2.16
ND BISMARCK	38	9	0.06	-0.43
DICKINSON	37	7	0.12	-0.32
FARGO	40	12	1.03	0.30
GRAND FORKS	37	11	0.43	-0.22
JAMESTOWN	38	10	0.09	-0.41
MINOT	37	9	0.23	-0.46
WILLISTON	35	8	0.12	-0.33
OH AKRON-CANTON	47	5	2.83	-0.18
CINCINNATI	50	6	3.31	-0.15
CLEVELAND	49	6	2.62	-0.55
COLUMBUS	49	6	3.69	0.47
DAYTON	48	5	2.86	-0.21
MANSFIELD	47	5	3.18	-0.33
TOLEDO	48	8	2.12	-0.69
YOUNGSTOWN	48	7	3.14	0.03
OK OKLAHOMA CITY	54	4	1.06	-0.92
TULSA	55	5	3.44	0.31
OR ASTORIA	49	2	14.21	4.16
BURNS	35	1	1.42	0.17
EUGENE	48	2	6.88	-1.44
MEDFORD	47	3	4.16	0.93
PENDLETON	42	0	1.15	-0.43
PORTLAND	48	2	6.90	1.56
SALEM	48	3	9.05	2.77
PA ALLENTOWN	47	4	1.10	-2.78
ERIE	49	6	2.36	-1.66
MIDDLETOWN	49	5	1.51	-2.01
PHILADELPHIA	53	7	0.56	-2.78
PITTSBURGH	48	6	3.47	0.62
WILKES-BARRE	46	5	1.89	-1.17
WILLIAMSPORT	46	4	2.74	-0.99
PR SAN JUAN	80	0	4.73	-1.21
RI PROVIDENCE	47	3	0.31	-4.12
SC CHARLESTON	64	6	0.53	-1.96
COLUMBIA	59	4	0.69	-2.21
FLORENCE	60	5	0.41	-2.11
GREENVILLE	56	4	1.98	-1.67
MYRTLE BEACH	61	6	1.61	-1.29
SD ABERDEEN	39	9	1.39	0.80
HURON	42	10	2.35	1.63
RAPID CITY	40	5	0.07	-0.49
SIOUX FALLS	44	11	4.76	3.67
TN BRISTOL	50	3	0.50	-2.44
CHATTANOOGA	56	5	4.84	0.23
JACKSON	53	2	10.31	5.52
KNOXVILLE	54	5	1.55	-2.20
MEMPHIS	57	4	11.61	6.51
NASHVILLE	54	4	5.09	0.97
TX ABILENE	58	3	3.39	1.91
AMARILLO	51	5	1.86	1.17
AUSTIN	61	0	9.13	6.76
BEAUMONT	64	3	5.32	0.47
BROWNSVILLE	70	1	2.42	0.91
COLLEGE STATION	64	4	2.88	-0.27
CORPUS CHRISTI	67	1	7.44	5.85
DALLAS/FT WORTH	60	4	1.07	-1.22
DEL RIO	63	3	1.12	0.20
EL PASO	55	3	0.60	0.16
GALVESTON	68	4	4.33	0.96
HOUSTON	64	3	2.58	-1.21
LUBBOCK	53	3	3.45	2.70
MIDLAND	54	1	1.47	0.78
SAN ANGELO	58	3	3.46	2.38
SAN ANTONIO	63	3	4.36	1.74
VICTORIA	64	1	3.83	1.38
WACO	61	3	5.63	3.20
WICHITA FALLS	58	6	1.16	-0.38
UT SALT LAKE CITY	43	2	3.34	2.05
VT BURLINGTON	42	5	1.81	-1.32
VA LYNCHBURG	51	3	0.33	-2.81
NORFOLK	56	3	0.08	-2.77
RICHMOND	55	5	0.20	-2.97
ROANOKE	53	6	0.63	-2.56
WASH/DULLES	50	5	0.84	-2.46
WA OLYMPIA	45	3	13.34	5.29
QUILLAYUTE	46	2	12.47	-2.27
SEATTLE-TACOMA	47	2	9.25	3.42
SPOKANE	40	5	2.61	0.46
YAKIMA	40	1	1.96	0.93
WV BECKLEY	49	6	0.66	-2.33
CHARLESTON	50	3	1.43	-2.16
ELKINS	44	3	0.86	-2.47
HUNTINGTON	51	5	1.64	-1.66
WI EAU CLAIRE	44	12	2.48	0.96
GREEN BAY	43	9	1.70	-0.46
LA CROSSE	47	11	1.92	0.19
MADISON	46	11	1.59	-0.50
MILWAUKEE	47	9	0.98	-1.53
WAUSAU	42	9	2.22	0.22
WY CASPER	39	6	0.76	-0.01
CHEYENNE	39	4	0.23	-0.30
LANDER	35	4	0.45	-0.35
SHERIDAN	37	4	0.83	0.00

Based on 1961-90 normals

*** Not Available

Autumn Weather Review

Review provided by USDA/WAOB

Highlights: Autumn began and ended with flooding rains in the Delta and environs, although long periods of warm, dry weather between the wet spells allowed fieldwork, including summer crop harvesting and winter wheat planting, to proceed. Meanwhile, extremely dry conditions prevailed from the Appalachians eastward, causing drought intensification, hampering winter wheat emergence and establishment, and contributing to a rash of autumn wildfires. The exception to the Eastern dry pattern was southern and eastern Florida, where the mid-September passage of Tropical Storm Gabrielle and an early-November brush with Hurricane Michelle contributed to above-normal rainfall. Meanwhile, heavy October rainfall hampered harvest activities across the eastern Corn Belt, followed by a return to warm and often dry weather in November. On the Plains, mid- to late-November precipitation eased autumn dryness in many areas, while November warmth promoted some late-season winter wheat development across the southern half of the region. However, extreme dryness persisted in wheat areas on the drought-plagued northern High Plains, while pockets of dryness lingered in parts of Kansas and Oklahoma. In the West, precipitation intensified during the last 3 weeks of November across northern California, the Great Basin, and the Northwest, following a slow start to the wet season. The Northwestern moisture eased the region's 21-month drought and boosted topsoil moisture and high-elevation snow packs. Farther south, however, only sporadic, light precipitation fell across the Southwest.

September: Widespread showers boosted soil moisture for newly planted winter wheat on the Plains, especially from Nebraska southward into Texas. However, unfavorably dry pockets persisted on the southern High Plains' wheat areas, while very warm, often dry weather reduced soil moisture for wheat emergence on the drought-affected northern High Plains. In winter wheat areas of the Northwest, scattered showers provided little relief from long-term drought, leaving reservoir supplies and soil moisture reserves limited. Elsewhere in the West, very warm, mostly dry weather promoted summer crop maturation and harvesting. Meanwhile across the South, heavy rainfall diminished early in the month, although moisture damage to some cotton, soybeans, and sorghum was irreversible in parts of the western and central Gulf Coast States. As the month progressed, fieldwork accelerated in the South, except across Florida's Peninsula, where the midmonth passage of Tropical Storm Gabrielle and subsequent showers further eased hydrological drought but caused localized flooding. Farther north, cool, mostly dry weather prevailed in the Mid-Atlantic region, while occasional showers eased long-term moisture deficits from the eastern Great Lakes region into the Northeast. In the Corn Belt, summer crops progressed toward maturity under mild, frequently showery conditions. Late-planted, immature corn and soybeans in the northwestern Corn Belt largely escaped a brush with scattered frost and near-freezing temperatures on September 24 and 25.

Monthly temperatures were generally below normal in the East and above normal in the West. Readings averaged 1 to 3°F below normal from the Corn Belt southward to the Gulf Coast, but as much as 5°F below normal in the Mid-Atlantic region. In the East, only Maine—where temperatures averaged up to 3°F above normal—escaped cool conditions. Meanwhile in the West, temperatures ranged from 3 to 7°F above normal across most inland areas. Cool weather was confined to the Pacific Coast region.

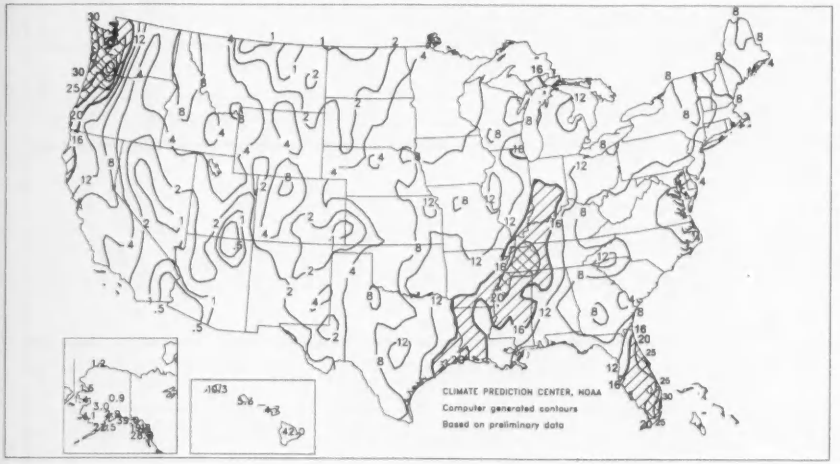
October: Heavy rainfall repeatedly disrupted summer crop harvesting and winter wheat planting in the eastern Corn Belt. In contrast, western Corn Belt corn and soybean harvests progressed with few delays. High winds swept across the Midwest on October 24-25, preceded by several days of scattered large hail. The severe weather adversely affected some unharvested Midwestern crops, including corn (lodged due to high winds and wet soils) and soybeans (locally battered by large hail). Meanwhile across the South, heavy showers diminished west of the Appalachians, allowing fieldwork to accelerate after midmonth. However, dryness persisted through a second consecutive month in the Atlantic Coast region, favoring fieldwork but hampering winter wheat establishment. Similarly, mild, breezy, mostly dry conditions on the Plains promoted summer crop harvesting but reduced soil moisture for winter wheat development, especially in Montana and from the central High Plains southward into Texas. An exception to the Plains' tranquil weather pattern was an early-season blizzard in the Red River Valley of the North on October 24-25 that halted fieldwork, disrupted transportation, and stressed livestock. Elsewhere, significant precipitation was confined to southern Florida and the Northwest. Florida's precipitation further eased long-term rainfall deficits, while the Northwest's rain and snow aided pastures and winter wheat, but provided little relief from subsoil moisture shortages and drought-reduced reservoir supplies.

The remainder of the West experienced warm, mostly dry weather. Warmth was especially prominent during the second half of October, propelling monthly temperatures 2 to 6°F above normal from northern California and the Great Basin southward to the Mexican border. Sharp temperature fluctuations were observed east of the Rockies, but monthly temperatures averaged within a few degrees of normal. The coolest weather, relative to normal, was noted in the Southeast, where readings averaged as much as 4°F below normal.

November: *A complete summary begins on page 7.*

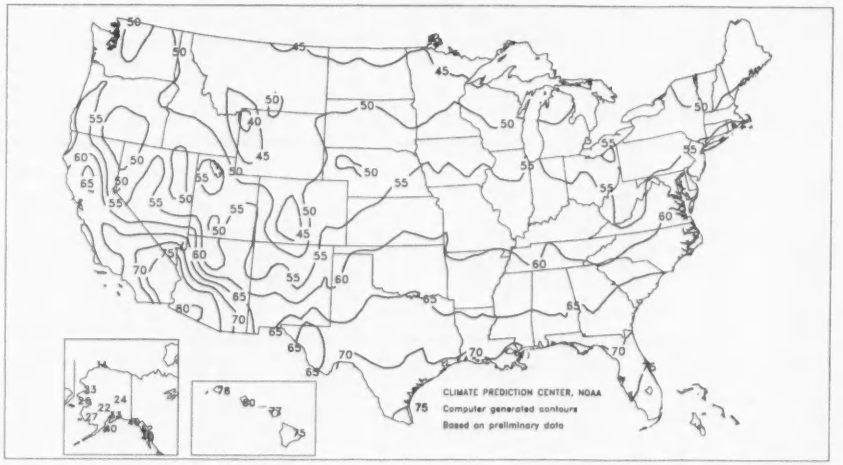
Total Precipitation (Inches)

SEP - NOV 2001



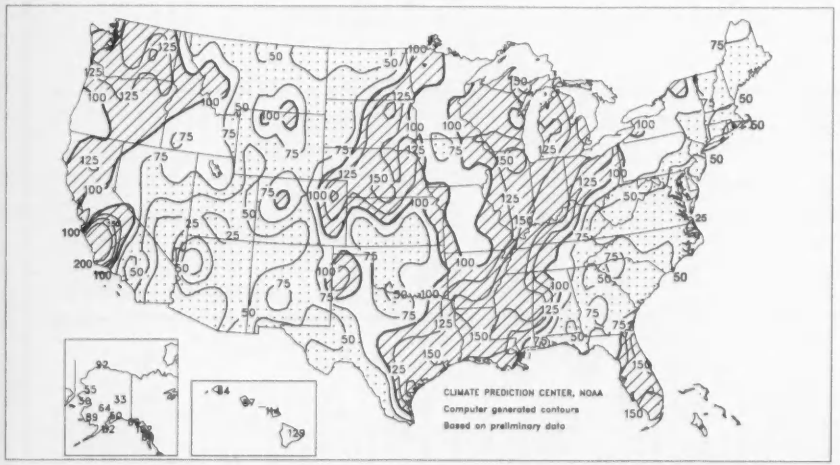
Average Temperature (°F)

SEP - NOV 2001



Percent Of Normal Precipitation

SEP - NOV 2001



Departure of Average Temperature from Normal (°F)

SEP - NOV 2001

TEMPERATURE AND PRECIPITATION SUMMARY
Autumn 2001

STATES AND STATIONS	TEMP, °F		PRECIP.	
	AVERAGE	DEPARTURE	TOTAL	DEPARTURE
AL BIRMINGHAM	64	1	12.88	1.81
HUNTSVILLE	62	0	10.80	-1.39
MOBILE	68	-1	7.37	-5.58
MONTGOMERY	65	-1	7.14	-3.48
AK ANCHORAGE	33	-2	2.94	-2.90
BARROW	14	0	1.19	-0.11
COLD BAY	40	-1	14.90	1.96
FAIRBANKS	24	0	0.86	-1.79
JUNEAU	42	1	19.79	0.31
KING SALMON	32	-2	5.43	-0.86
KODIAK	40	-2	22.49	2.36
NOME	27	-2	1.44	-3.38
AZ FLAGSTAFF	50	3	2.17	-3.42
PHOENIX	80	6	0.22	-1.95
TUCSON	73	3	1.09	-2.31
AR FORT SMITH	63	1	9.01	-1.90
LITTLE ROCK	63	0	14.66	1.66
CA BAKERSFIELD	68	1	1.30	0.14
EUREKA	52	-3	8.97	-1.03
FRESNO	67	3	2.26	0.12
LOS ANGELES	65	-1	1.40	-1.01
REDDING	66	3	8.54	0.18
SACRAMENTO	64	1	3.09	-1.08
SAN DIEGO	65	-2	0.99	-1.07
SAN FRANCISCO	61	1	4.94	0.66
STOCKTON	64	1	2.52	-0.79
CO ALAMOSA	44	1	0.40	-1.62
CO SPRINGS	52	3	1.41	-1.23
DENVER	53	2	1.79	-1.30
GRAND JUNCTION	56	2	2.19	-0.32
PUEBLO	53	0	1.00	-0.90
CT BRIDGEPORT	57	1	4.70	-5.29
HARTFORD	54	2	4.74	-6.66
DC WASHINGTON	61	1	2.68	-6.77
DE WILMINGTON	58	1	4.29	-5.29
FL DAYTONA BEACH	73	0	26.26	12.95
FT LAUDERDALE	78	0	26.14	8.27
FT MYERS	75	-2	16.88	4.55
JACKSONVILLE	69	-1	18.30	6.16
KEY WEST	78	-2	20.11	7.00
MELBOURNE	74	0	21.56	7.83
MIAMI	78	0	32.31	16.38
ORLANDO	74	-1	13.16	2.43
PENSACOLA	70	1	6.40	-6.67
ST PETERSBURG	75	-1	13.97	2.50
TALLAHASSEE	68	-1	11.62	-0.75
TAMPA	75	1	14.26	4.49
WEST PALM BEACH	77	0	24.91	5.09
GA ATHENS	63	0	2.64	-7.66
ATLANTA	64	1	4.00	-6.33
AUGUSTA	64	0	4.59	-3.75
COLUMBUS	67	1	6.60	-2.41
MACON	64	-1	9.20	1.51
SAVANNAH	67	-1	5.04	-4.01
HI HILO	75	0	42.05	9.41
HONOLULU	80	1	5.25	-0.81
KAHULUI	77	0	4.74	0.57
LIHUE	78	1	10.30	-1.93
ID BOISE	55	4	2.83	-0.20
LEWISTON	55	2	3.28	0.45
POCATELLO	49	1	1.71	-1.21
IL CHICAGO/O'HARE	54	2	15.81	6.66
MOLINE	55	3	9.11	-0.35
PEORIA	56	2	11.13	1.92
ROCKFORD	53	2	15.23	5.98
SPRINGFIELD	56	1	10.07	1.61
IN EVANSVILLE	58	1	15.13	5.56
FORT WAYNE	54	1	12.62	4.67
INDIANAPOLIS	56	1	14.36	5.63
SOUTH BEND	54	2	12.42	2.45
IA BURLINGTON	56	3	8.70	-0.67
CEDAR RAPIDS	52	1	7.70	-0.51
DES MOINES	55	2	7.65	-0.29
DUBUQUE	51	2	10.88	0.77
SIOUX CITY	53	3	7.66	1.76
WATERLOO	53	4	8.53	0.63
KS CONCORDIA	57	2	6.44	0.31
DODGE CITY	58	1	2.39	-1.63
GOODLAND	54	2	3.00	-0.16
HILL CITY	55	1	4.64	0.39
TOPEKA	58	2	12.09	3.29
WICHITA	60	2	4.81	-2.49
KY JACKSON	59	1	4.55	-6.51
LEXINGTON	58	1	9.47	0.31
LONDON-CORBIN	57	0	6.04	-4.07
LOUISVILLE	60	2	15.62	6.05
PADUCAH	59	0	18.00	6.99
LA BATON ROUGE	68	-1	13.20	0.56
LAKE CHARLES	69	0	17.51	3.61
NEW ORLEANS	71	2	13.95	0.97
SHREVEPORT	66	-1	16.16	4.86
ME BANGOR	49	1	7.29	-4.09
CARIBOU	46	3	8.76	-1.34
PORTLAND	51	2	8.09	-4.07
MD BALTIMORE	57	0	3.23	-6.48
MA BOSTON	56	1	4.00	-6.58
WORCESTER	53	3	5.48	-7.34
MI ALPENA	49	2	11.28	3.87
DETROIT	54	2	13.40	5.74
FLINT	52	2	13.43	5.09
GRAND RAPIDS	52	3	13.50	3.13
HOUGHTON LAKE	48	2	10.20	2.34
LANSING	51	2	11.17	2.88
MUSKEGON	51	1	12.14	2.31
TRAVERSE CITY	49	0	12.21	3.08
MN DULUTH	46	4	6.06	-2.07
INT'L FALLS	44	4	5.61	-0.66
MINNEAPOLIS	52	5	7.57	1.11
ROCHESTER	50	3	7.53	0.13
ST. CLOUD	48	4	5.88	-0.76
MS JACKSON	65	0	14.28	2.66
MERIDIAN	64	-1	17.89	6.82
TUPELO	62	-1	16.45	4.58
MO COLUMBIA	57	1	8.68	-1.33
JOPLIN	61	2	12.98	0.53
KANSAS CITY	58	2	11.10	1.03
SPRINGFIELD	58	0	9.88	-2.06
ST JOSEPH	56	1	9.52	0.19
ST LOUIS	60	2	11.38	2.30
MT BILLINGS	51	3	2.18	-1.16
BUTTE	43	3	2.55	0.07
GLASGOW	47	3	0.79	-1.10
GREAT FALLS	50	4	1.96	-0.72
HELENA	51	7	2.11	-0.12
KALISPELL	45	3	2.81	-0.62
MILES CITY	49	2	1.09	-1.62
MISSOULA	47	3	2.89	0.22
NE GRAND ISLAND	55	4	4.45	-0.79
HASTINGS	55	4	9.10	3.19
LINCOLN	56	3	8.81	1.94
MCCOOK	56	4	5.24	1.65
NORFOLK	54	4	6.35	1.29
NORTH PLATTE	50	1	4.52	1.27
OMAHA/EPPLEY	56	3	6.04	-1.45
SCOTTSBLUFF	51	2	2.08	-0.45
VALENTINE	51	3	4.02	0.98
NV ELKO	50	3	2.09	-0.29
ELY	48	3	1.69	-0.88
LAS VEGAS	72	4	0.09	-0.83
RENO	57	7	1.08	-0.56
WINNEMUCCA	52	3	1.28	-0.68
NH CONCORD	50	2	5.61	-4.09
NJ ATLANTIC CITY	57	1	3.41	-5.92
NEWARK	59	1	5.64	-4.98
NM ALBUQUERQUE	60	3	1.35	-0.97
NY ALBANY	53	3	4.33	-4.68
BINGHAMTON	51	2	8.06	-1.43
BUFFALO	54	3	11.13	0.72
ROCHESTER	53	2	7.33	-1.00
SYRACUSE	54	3	9.15	-1.60
NC ASHEVILLE	56	-1	6.38	-4.67
CHARLOTTE	61	-1	5.93	-4.16
GREENSBORO	60	1	2.80	-7.19
HATTERAS	65	0	5.42	-9.80
RALEIGH	61	0	3.21	-5.82
WILMINGTON	65	-1	4.44	-6.40
ND BISMARCK	47	3	1.98	-0.90
DICKINSON	47	3	2.50	-0.57
FARGO	48	4	5.25	0.85
GRAND FORKS	45	3	3.30	-0.88
JAMESTOWN	46	2	2.83	-0.39
MINOT	46	3	0.95	-2.64
WILLISTON	45	2	0.69	-1.86
OH AKRON-CANTON	54	1	9.88	1.20
CINCINNATI	56	0	13.17	3.97
CLEVELAND	55	2	12.08	2.93
COLUMBUS	56	2	8.59	0.26
DAYTON	55	1	11.74	3.65
MANSFIELD	53	0	10.43	1.20
TOLEDO	55	4	13.10	5.34
YOUNGSTOWN	54	3	9.37	0.16
OK OKLAHOMA CITY	61	-1	10.15	1.10
TULSA	63	1	8.19	-3.30
OR ASTORIA	53	0	19.41	0.72
BURNS	46	1	2.98	0.45
EUGENE	55	1	10.22	-3.18
MEDFORD	57	2	5.15	-0.42
PENDLETON	53	1	2.78	-0.25
PORTLAND	56	1	10.75	0.99
SALEM	55	2	13.01	2.20
PA ALLENTOWN	54	0	6.13	-4.62
ERIE	55	2	8.84	-3.34
MIDDLETOWN	56	1	4.70	-5.26
PHILADELPHIA	60	3	3.96	-5.42
PITTSBURGH	55	2	8.02	-0.16
WILKES-BARRE	53	1	6.88	-2.28
WILLIAMSPORT	53	1	9.56	-0.86
PR SAN JUAN	82	1	14.74	-1.70
RI PROVIDENCE	55	1	5.34	-6.26
SC CHARLESTON	67	0	6.10	-4.02
COLUMBIA	64	0	2.69	-6.92
FLORENCE	64	-1	4.39	-4.15
GREENVILLE	61	0	12.11	0.51
MYRTLE BEACH	65	2	6.24	-5.46
SD ABERDEEN	48	2	5.96	2.39
HURON	51	4	4.51	0.60
RAPID CITY	50	2	1.83	-1.06
SIOUX FALLS	51	4	7.88	1.99
TN BRISTOL	56	-1	3.54	-5.25
CHATTANOOGA	62	1	11.32	-0.66
JACKSON	60	-1	18.79	7.09
KNOXVILLE	60	1	5.98	-3.68
MEMPHIS	64	1	21.87	10.23
NASHVILLE	61	0	11.49	1.29
TX ABILENE	66	0	6.18	-1.02
AMARILLO	60	2	4.93	0.88
AUSTIN	67	-4	13.32	4.22
BEAUMONT	70	0	20.14	4.69
BROWNSVILLE	76	1	6.03	-4.28
COLLEGE STATION	70	1	15.22	3.39
CORPUS CHRISTI	73	-1	16.70	6.57
DALLAS/FT WORTH	66	-1	6.68	-2.52
DEL RIO	71	1	3.80	-2.19
EL PASO	66	2	0.90	-2.00
GALVESTON	73	1	15.59	3.45
HOUSTON	69	-1	20.37	7.42
LUBBOCK	62	1	4.32	-0.88
MIDLAND	65	2	2.45	-2.60
SAN ANGELO	66	0	5.85	-1.04
SAN ANTONIO	69	-1	10.50	1.30
VICTORIA	71	0	15.69	4.18
WACO	67	-1	10.72	1.41
WICHITA FALLS	66	2	2.24	-5.86
UT SALT LAKE CITY	56	3	4.30	0.29
VT BURLINGTON	51	3	4.59	-4.72
VA LYNCHBURG	56	-2	3.28	-6.80
NORFOLK	62	0	3.30	-6.60
RICHMOND	60	1	2.97	-7.07
ROANOKE	59	2	3.18	-7.36
WASH/DULLES	57	1	5.69	-4.17
WA OLYMPIA	50	0	18.20	3.58
QUILLAYUTE	50	0	28.88	-1.26
SEATTLE-TACOMA	53	0	13.19	2.25
SPOKANE	50	3	4.87	1.00
YAKIMA	51	1	2.46	0.56
WV BECKLEY	54	1	2.71	-6.50
CHARLESTON	56	-1	4.66	-5.06
ELKINS	51	0	3.91	-6.26
HUNTINGTON	58	1	4.43	-4.63
WI EAU CLAIRE	50	4	7.26	-0.59
GREEN BAY	49	2	5.78	-2.08
LA CROSSE	52	3	8.93	1.21
MADISON	51	3	9.76	2.13
MILWAUKEE	53	3	9.88	1.58
WAUSAU	49	3	8.98	0.01
WY CASPER	49	3	2.29	-0.39
CHEYENNE	49	2	1.80	-0.74
LANDER	48	3	1.82	-1.21
SHERIDAN	47	2	4.53	1.15

Based on 1961-90 normals

*** Not Available

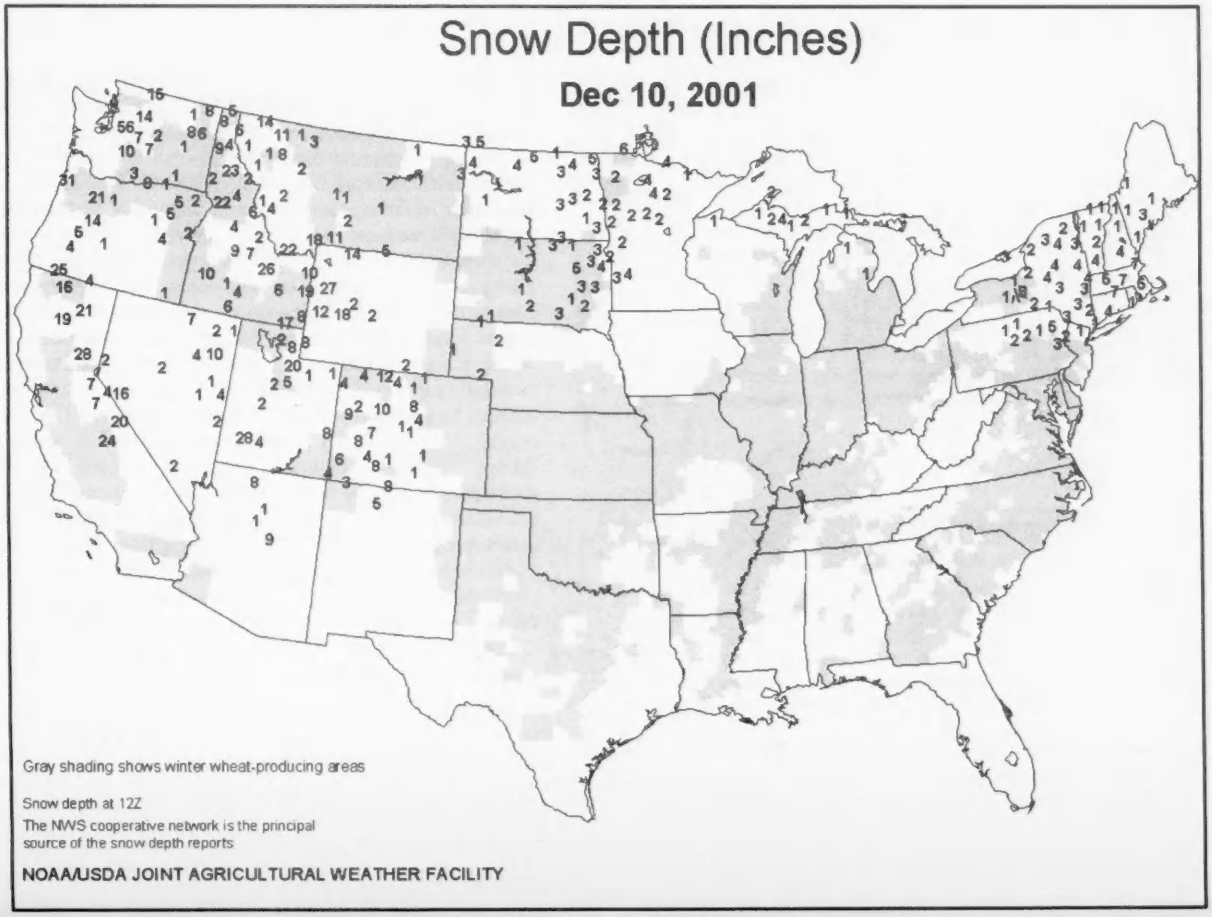
National Agricultural Summary

December 3 - 9, 2001

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Above-normal temperatures prevailed across most of the Nation, stimulating vegetative growth of winter crops and forages. In the northern Great Plains, the unusually warm weather melted the winter wheat crop's protective snow cover, but provided much-needed moisture for short-term development. In the central and southern Great Plains, moisture shortages increased, limiting the winter wheat crop's response to the favorable temperatures. Widespread, light precipitation maintained topsoil moisture supplies in the central and eastern Corn Belt, and supported development of the soft red winter wheat crop. Rain boosted moisture reserves in the valleys of California and the Pacific Northwest, while snow accumulations continued to build in the higher elevations of the Cascade, Sierra, and interior mountain ranges. Unfavorably wet weather continued along a band extending from the western Gulf Coast to the upper Ohio River Valley, while much of the Atlantic Coastal Plain remained unfavorably dry. Late-season harvest and fall tillage were uninterrupted in the Texas High Plains, and field and orchard work continued with only brief rain delays in Florida.


Snow Depth (Inches)
Dec 10, 2001
Gray shading shows winter wheat-producing areas
Snow depth at 12Z
The NWS cooperative network is the principal source of the snow depth reports
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

International Weather and Crop Summary

December 2 - 8, 2001

International Weather and Crop Highlights and Summaries provided by USDA/WAOB

HIGHLIGHTS

EUROPE: Relatively mild weather in western Europe promoted additional crop development, while unseasonably cold weather continued across eastern Europe.

FSU-WESTERN: An adequate snow cover protected dormant winter grains from the first bitter cold outbreak of the season.

MIDDLE EAST: Widespread, locally heavy rain boosted moisture reserves for winter wheat in most major production areas.

NORTHWESTERN AFRICA: Warm, mostly dry weather reduced topsoil moisture for winter grains throughout the region.

SOUTH AFRICA: Locally heavy rain continued in the western corn belt, while sunny skies aided summer crop development in the east.

SOUTH ASIA: Dry, warmer-than-normal weather hastened summer crop harvesting and fostered winter crop planting.

SOUTHEAST ASIA: A tropical depression moved across the central Philippines, bringing heavy showers and causing flooding.

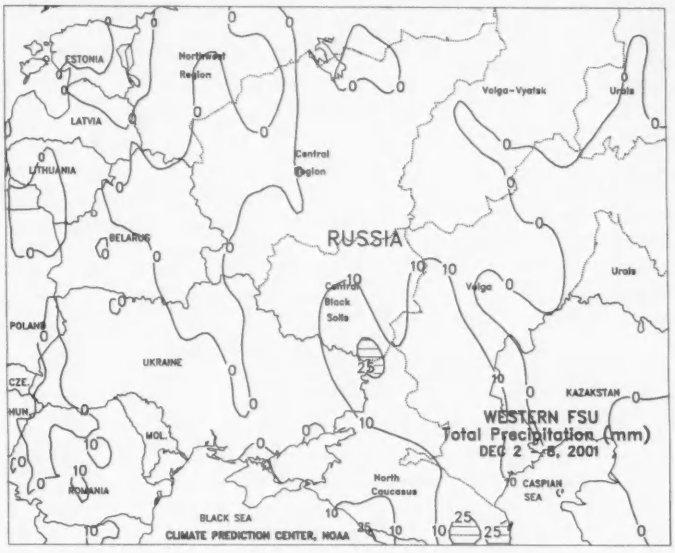
EASTERN ASIA: In the northern North China Plain, winter wheat began to enter dormancy, while widespread precipitation boosted moisture supplies for winter grains and oilseeds across the southern North China Plain and northern Yangtze Valley.

SOUTH AMERICA: In central Argentina, mostly dry weather continued to favor maturing winter wheat and summer crop planting, but western summer crop areas are becoming too dry. Across the major crop areas of southern Brazil, widespread showers continued to maintain adequate soil moisture for crop development.

AUSTRALIA: Scattered, mostly light showers continued in primary growing areas, benefiting vegetative summer crops but slowing winter crop harvesting.

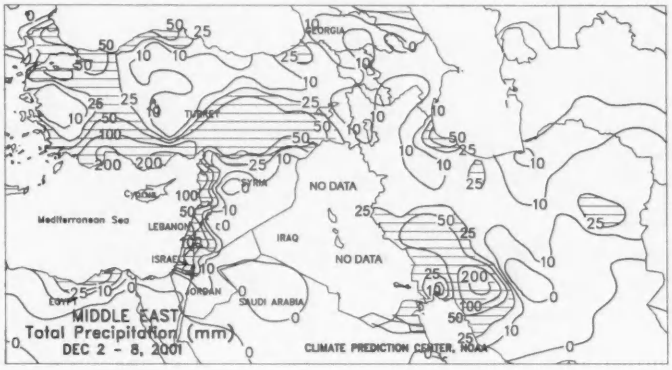
EUROPE

In northwestern and north-central Europe, scattered showers (3-23 mm or more) maintained adequate moisture supplies for winter grains and oilseeds, but caused some interruptions in fieldwork, including late sugar beet harvesting in England. Farther east, scattered rain and snow showers (mostly less than 10 mm of liquid equivalent) had little impact on dormant winter grains in eastern Europe. In south-central and southwestern Europe, mostly dry weather promoted winter grain planting, but helped reduce topsoil moisture for germinating and emerging winter grains. Temperatures in England, Spain, and Portugal averaged near normal, while elsewhere in western and central Europe, temperatures averaged about 2 to 4 degrees C above normal. The continued relatively mild weather in western Europe promoted additional winter grain and oilseed development. In contrast, temperatures in eastern Europe averaged about 2 to 5 degrees C below normal, keeping winter grains dormant. A shallow, uniform snow pack covered much of northeastern Europe, while more patchy snow cover was established across major crop growing areas in southeastern Europe. Although minimum temperatures ranged from -19 to -12 degrees C in parts of Poland and Romania, temperatures were unlikely low enough to cause widespread winterkill.



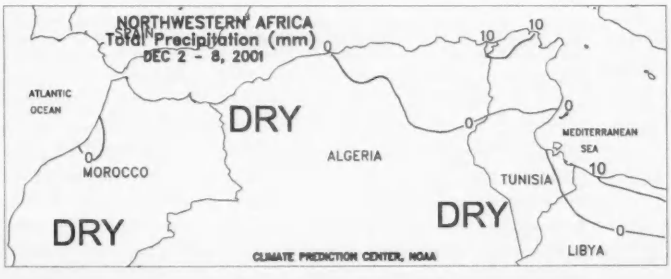
FSU-WESTERN

Snow accompanied the first bitter cold outbreak of the season. Periods of light snow (less than 5 mm of liquid equivalent) fell in western Ukraine during the week, providing additional protective snow cover. Light to moderate snow (3-28 mm of liquid equivalent) fell in eastern Ukraine, the lower Volga Valley, and the North Caucasus region in Russia, increasing protective snow cover. Elsewhere, scattered snow showers maintained a moderate to deep snow cover in northern Russia and a light to moderate snow cover in Belarus and the Baltics. Bitterly cold air gradually spread southward across winter grain areas in Ukraine and the North Caucasus region in Russia. In general, extreme cold (minimum temperatures ranging from -20 to -15 degrees C) was observed over winter grain areas protected by snow cover, minimizing the threat for widespread damage. Although winter grain areas in southern Ukraine and the extreme southern portion of the North Caucasus region in Russia lacked a protective snow cover, minimum temperatures (-13 to -5 degrees C) remained above the threshold for potential winterkill. Weekly temperatures averaged 5 to 8 degrees C below normal in northern Russia, Ukraine, Belarus, and the Baltics, and 2 to 5 degrees C below normal in southern Russia.



MIDDLE EAST

Beneficial rain continued across the region's primary winter wheat areas. The heaviest rain (25-50 mm or more) fell in southeastern Turkey and the Anatolian Plateau, as well as in previously dry sections of Iran, where the moisture was especially welcomed. In western Turkey, very heavy rain (50-200 mm or more) exacerbated flooding in some south-coastal areas, possibly causing additional damage to unharvested summer crops, including the relatively small percentage of remaining cotton. Lighter rain (5-10 mm or more) covered the remainder of the region including Iraq, as depicted by satellite imagery and prevailing weather patterns. The weather was seasonably cool throughout the region, slowing vegetative growth and easing some crops toward dormancy. Although seasonal temperatures are limiting winter wheat development, especially in the northwest, rain is still needed across Iran to build moisture reserves for proper wheat establishment.

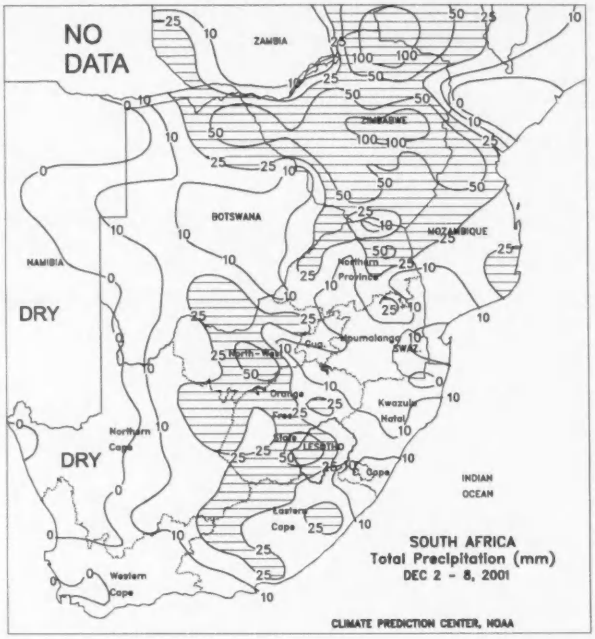


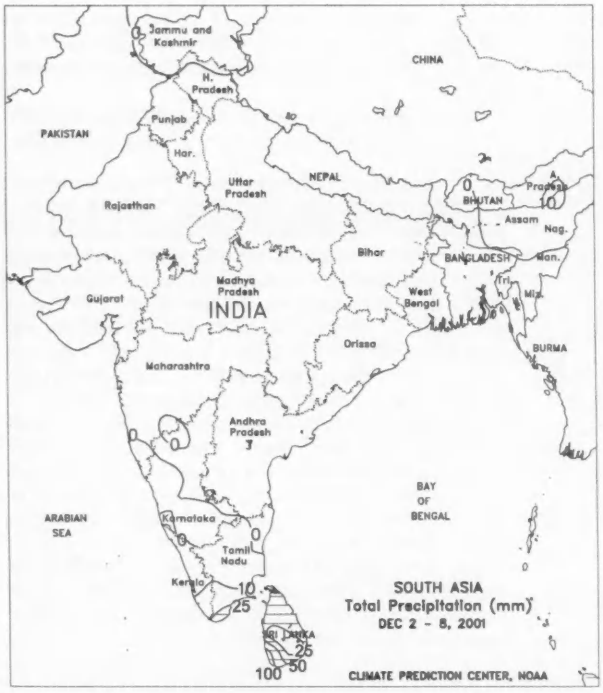
NORTHWESTERN AFRICA

Warm, mostly dry weather prevailed throughout Morocco, Algeria, and Tunisia. Topsoil moisture remained unfavorably low in Morocco, where growers continued to await more rain. Little if any rain has fallen in Morocco since the beginning of the growing season. The mostly dry weather in winter grain areas of Algeria and Tunisia resulted in declining topsoil moisture, needed for winter grain germination and establishment. Subsoil moisture reserves continued to be unfavorably low throughout the region, necessitating timely rains during the remainder of the growing season to sustain normal crop development.

SOUTH AFRICA

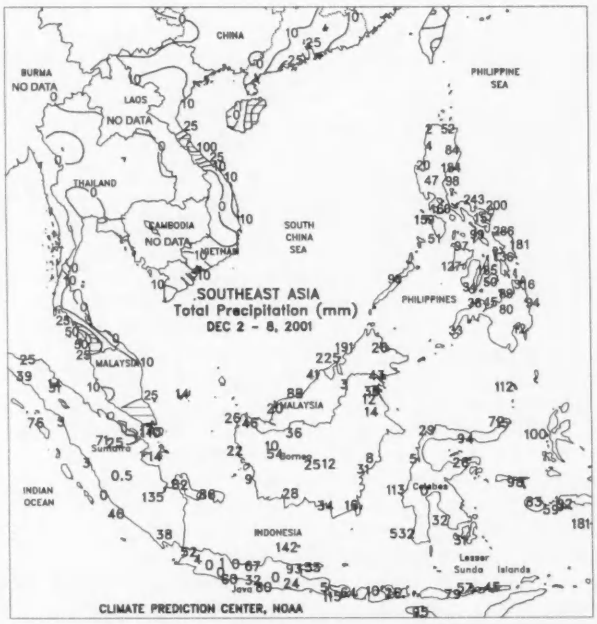
Moderate to heavy rain (10-50 mm) continued in western sections of the corn belt (North West and central Free State), maintaining abundant moisture supplies for summer crop establishment. Drier weather (rainfall less than 10 mm) dominated much of the eastern corn belt (eastern Free State, southern Mpumalanga, and surrounding areas), but moisture levels remained favorable for crop development. Temperatures averaged near to below normal across the corn belt, slowing vegetative growth of corn, sunflowers, and other summer crops. Rainfall tapered off somewhat in previously wet areas of KwaZulu-Natal and Eastern Cape, with amounts totaling 10 to 25 mm or more. Warm, dry weather maintained seasonably high irrigation requirements in orchards and vineyards in Western Cape.





SOUTH ASIA

Dry, warmer-than-normal weather dominated the region, as the monsoon retained its seasonal position over Sri Lanka. Conditions favored summer crop harvesting and allowed winter grain and oilseed planting to progress unimpeded. In Pakistan and northwestern India, temperatures averaging 3 to 6 degrees C above normal hastened drydown and harvesting of cotton.

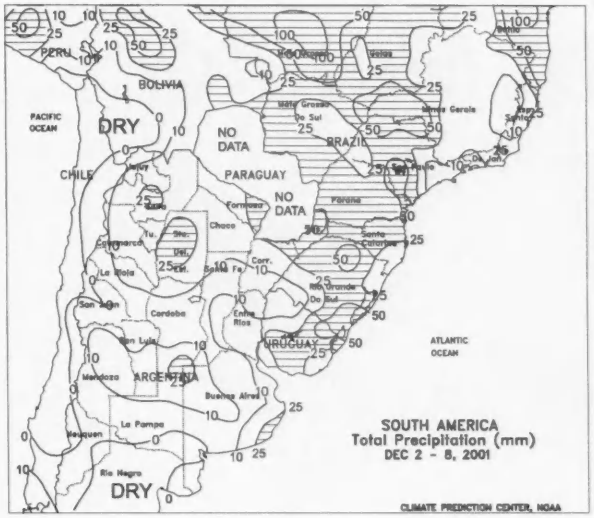


SOUTHEAST ASIA

A tropical depression moved across the central Philippines, bringing heavy showers (50-300 mm) from southern Luzon to northern Mindinao. The system became a tropical storm (Kajiki) as it moved into the South China Sea. The rainfall slowed fieldwork for rice and plantation crops and caused flooding. Dry weather in western Java, Indonesia, reduced moisture supplies for vegetative main-season rice, while showers (25-50 mm) in eastern areas were more favorable. Showers (25-100 mm) increased moisture availability to oil palm in Sumatra, Indonesia, while lighter showers (10-25 mm) maintained moisture reserves in peninsular Malaysia. In Vietnam, showers (10-25 mm) were widespread, favoring winter-spring rice transplanting in the south and vegetative rice in the north. Seasonal dryness favored rice fieldwork across Thailand.

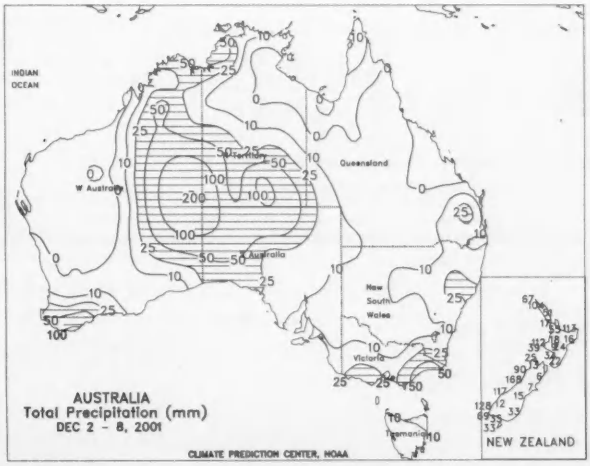
EASTERN ASIA

Across the North China Plain, seasonably cold weather prompted winter wheat to begin entering dormancy across the northern areas of Hebei, Shanxi, and Beijing. Farther south, widespread precipitation (15-60 mm or more) fell across the southern North China Plain and the northern half of the Yangtze Valley. Mostly dry weather covered southern China, favoring late rice harvesting, but reducing moisture supplies for winter crops and sugarcane. Temperatures averaged 2 to 4 degrees C below normal across the North China Plain and 1 to 3 degrees C above normal across extreme southern China.



SOUTH AMERICA

In central Argentina, mostly dry weather continued to favor maturing winter wheat and summer crop planting. However, in portions of south-central Cordoba and northern La Pampa, topsoil moisture is becoming unfavorably low for summer crops. Moderate showers (20-40 mm) maintained adequate soil moisture for summer crop development in extreme southeastern Cordoba and southern Santa Fe. Winter wheat harvesting continued in Cordoba and Santa Fe and started in northern Buenos Aires. In northern Argentina, light to moderate rain (10-30 mm) aided germinating cotton. Across Argentina, temperatures averaged 2 to 4 degrees C below normal, slowing crop development. In southern Brazil, widespread showers (20-70 mm or more) covered the major soybean- and corn-producing areas, maintaining adequate soil moisture for soybeans, sugarcane, coffee, and oranges. Drier weather (less than 15 mm) fell across Espirito Santo and eastern Minas Gerais. According to Safras, a Brazilian grain analyst firm, as of December 7, soybeans were 91 percent planted, compared with the 5-year average of 88 percent.



AUSTRALIA

Light to moderate showers (5-10 mm, locally exceeding 25 mm) continued across the southeast (South Australia, Victoria, and southern New South Wales) and in southern agricultural districts of Western Australia. The moisture was untimely for mature winter grains and oilseeds but further improved grazing conditions. Near- to below-normal temperatures in these areas enhanced the effects of dampness on unharvested winter crops and raised quality concerns. Elsewhere, rain (10-25 mm or more) boosted irrigation reserves for cotton, sorghum, and sugarcane in east-central Australia (southern Queensland and northern New South Wales), although showers were lighter (5 mm or less) in western-most growing areas. Seasonably warm weather spurred summer crop development but kept evaporative losses high in western grazing areas. In New Zealand, light to moderate showers (5-25 mm or more) returned to the main small grain and pasture areas, with heavier rain (25-50 mm or more) falling in west-coastal growing areas.

The *Weekly Weather and Crop Bulletin* (ISSN 0043-1974) is published weekly and jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the *Weekly Weather Chronicle*. It is issued under general authority of the Act of January 12, 1895 (44-USC 213), 53rd Congress, 3rd Session. NOAA is responsible for managing, printing, and distributing the bulletin. The contents may be reprinted freely, with proper credit.

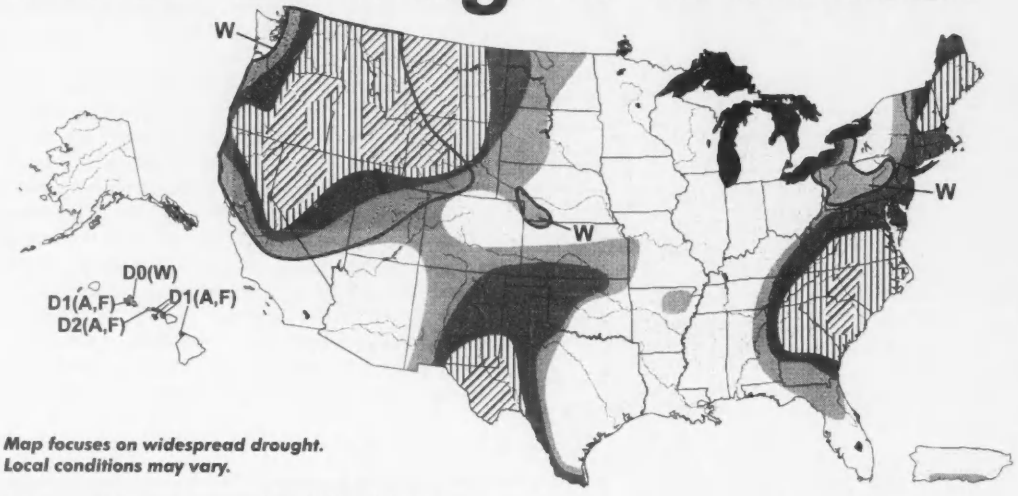
Annual subscriptions: domestic first class **$45**, foreign **$55** (in U.S. funds by international money order or check drawn on U.S. bank) payable to **U.S. Department of Commerce, NOAA**. POSTMASTER: Send address changes to: **Climate Prediction Center, W/NP52, Attn: *Weekly Weather and Crop Bulletin*, Room 605, WWBG, 5200 Auth Road, Camp Springs, MD 20746-4304**. Order subscriptions from the office and address listed above. First-class postage paid at Washington, DC, and other mailing offices. Correspondence to the meteorologists should be directed to: **Weekly Weather and Crop Bulletin, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 5844, Washington, DC 20250.** Internet URL: **http://www.usda.gov/oce/waob/jawf**; E-mail address: ***bmorris@oce.usda.gov***

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Climate Prediction Center
Managing Editor . . . . . ***David Miskus*** *(202) 720-7919*
Meteorologists . . . . . ***Eric Luebehusen, Brad Pugh,*** . . . . . and ***Chester Schmitt***
Subscriptions . . . . ***John Kopman*** (301) 763-8000 ext 7534
. . . . . **fax:** (301) 763-8125

U.S. DEPARTMENT OF AGRICULTURE
Economic Research Service
E.R.S. Editor . . . . . ***Sharon Lee***
National Agricultural Statistics Service
Agricultural Statistician . . . . . ***Mark Miller*** (202) 720-7621
State Summaries Editor . ***Delores Thomas*** (202) 720-8033
World Agricultural Outlook Board
International Editor . . . . . ***Tom Puterbaugh***
U.S. Editor . . . . . ***Brad Rippey*** (202) 720-2397
Agricultural Weather Analysts . . . . . ***Mark Brusberg*** . . . . . ***Bob Stefanski, Brian Morris,*** and ***Harlan Shannon***
Stoneville . . . . . ***Lee Crowley*** and ***Josh Stewart***

December 4, 2001 Valid 8 a.m. EST

U.S. Drought Monitor



Map focuses on widespread drought.
Local conditions may vary.

D0 Abnormally Dry
D1 Drought-First Stage
D2 Drought–Severe
D3 Drought–Extreme
D4 Drought–Exceptional
Delineates Overlapping Areas

Drought Impact Types:
A = Agriculture
W = Water (Hydrological)
F = Fire danger (Wildfires)
(No type = All 3 impacts)

USDA National Drought Mitigation Center

See accompanying text summary for forecast statements
http://enso.unl.edu/monitor/monitor.html

• ***Released Thursday, December 6, 2001*** •
Author: *Rich Tinker, CPC/NOAA*

Climate Prediction Center, W/NP52
Attn: *Weekly Weather & Crop Bulletin*
NOAA/NWS/NCEP/CPC
5200 Auth Road
WWB, Room 605
Camp Springs, MD 20746-4304

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

WEEKLY NEWS BULLETIN
FIRST CLASS

WWCB 1

UMI
Periodicals check In
P.O.Box 1346
Ann Arbor MI 48106-1346

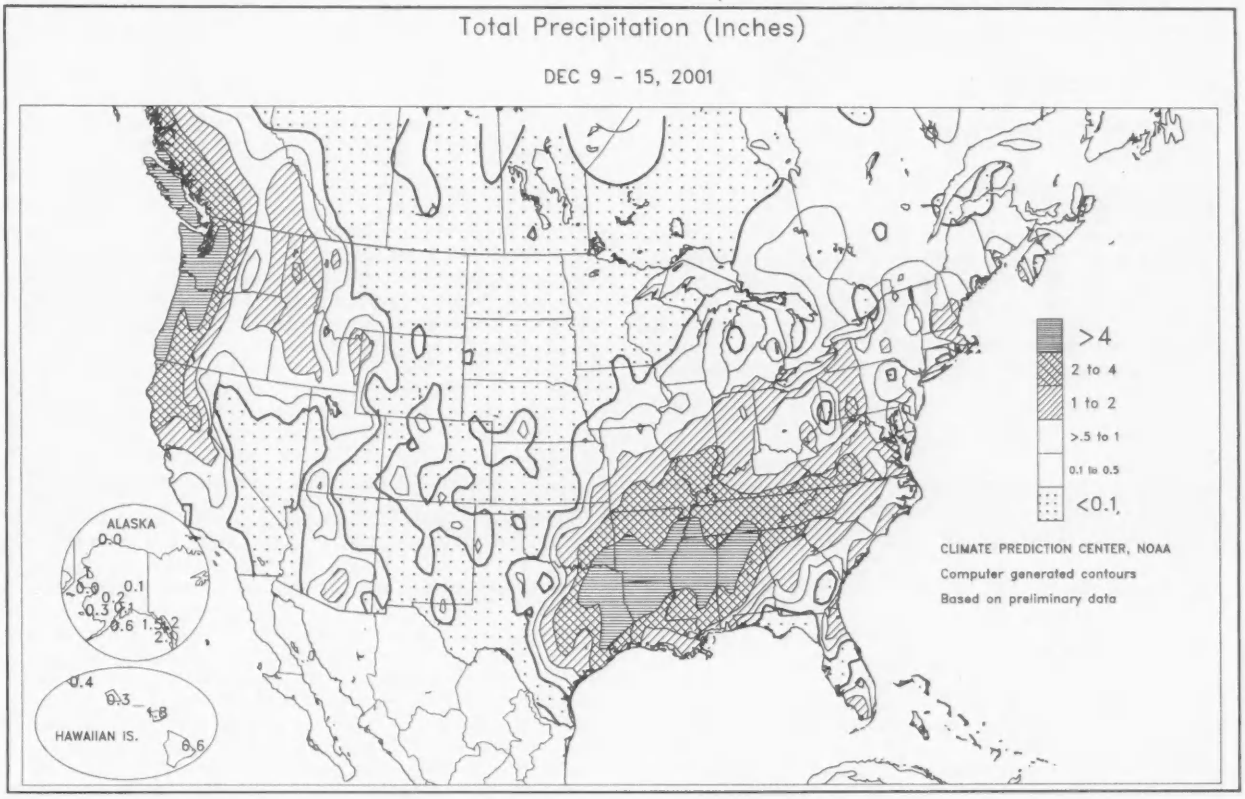
FIRST CLASS MAIL
POSTAGE & FEES PAID
NOAA
PERMIT NO. G-19

Volume 88, No. 51 http://www.usda.gov/oce/waob/jawf/wwcb.html December 18, 2001

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
and World Agricultural Outlook Board



HIGHLIGHTS

December 9 - 15, 2001

Highlights provided by USDA/WAOB

Heavy rainfall returned to the **South** during the mid- to late-week passage of two storm systems, bringing renewed lowland flooding to areas from **eastern Texas to the lower Ohio Valley** and submerging some winter wheat fields. Among the hardest hit areas was the **Delta**, where generally 4 to 6 inches of rain fell on top of 6- to 15-inch totals in late November. Meanwhile, drought-easing precipitation overspread the **East**, but largely bypassed the **southern Atlantic Coastal Plain**, where unfavorably dry conditions maintained the threat of wildfire activity and continued to stress winter grains. In contrast, more than 2 inches of rain soaked the previously dry **southern**

(Continued on page 3)

Contents

January & January-March Outlooks 2
Temperature Departure & Extreme Minimum Temperature Maps 3
Weather Data for the Delta and Bootheel & **U.S. Crop Production Highlights** 4
National Weather Data for Selected Cities 5
National Agricultural Summary & Snow Cover Map 8
International Weather and Crop Summary & **November Temperature/Precipitation Maps** 9
Subscription Information & December 11 Drought Monitor 24

Monthly Temperature & Precipitation Outlook

Temperature Outlook: January 2002

Above-normal temperatures (A) are expected from the Southwest eastward across the southern Plains and into the Southeast. Meanwhile, below-normal temperatures will likely develop in the Northeast. For the remainder of the United States, there are no strong indications for above- or below-normal temperatures. Therefore, climatology (CL) is forecast.

Precipitation Outlook: January 2002

Below-normal precipitation (B) is expected accompany the warmer-than-normal conditions in portions of the Southwest as well as the eastern Gulf Coast states, including Florida. For the rest of the United States, there are no strong forecast indicators for above- or below-normal precipitation, so climatology (CL) is forecast.

Seasonal Temperature & Precipitation Outlook

Temperature Outlook: January - March 2002

Seasonal forecasts reflect ENSO-neutral conditions (weak or non-existent El Niño or La Niña). Above-normal (A) temperatures should expand to encompass much of the southern United Sates, the central and southern Rockies, and the Great Basin. In addition, above normal temperatures will spread northward along the Pacific coast, including southern Alaska. Below-normal temperatures (B) will likely persist in the Northeast, but expand into portions of the Great Lakes and Mid Atlantic. Climatology (CL) is forecast for the rest of the country since forecast indicators favor neither above- nor below-normal temperatures.

Precipitation Outlook: January - March 2002

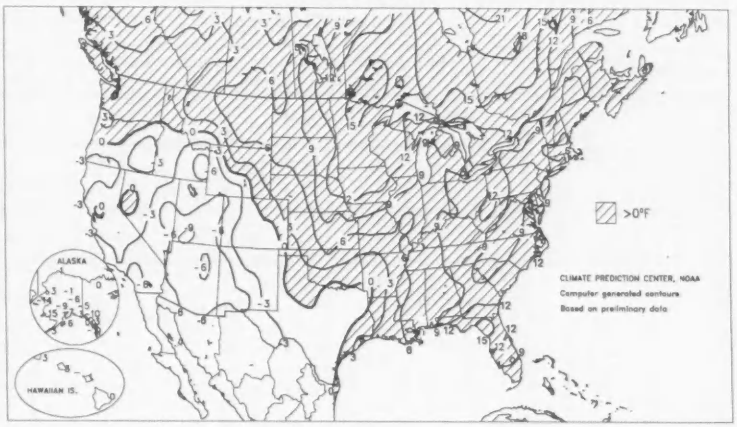
Seasonal forecasts reflect ENSO-neutral conditions (weak or non-existent El Niño or La Niña). An area of above-normal (A) precipitation is forecast across the southern Plains. Meanwhile, below-normal rainfall (B) is forecast for Florida, the western Corn Belt, and California. Climatology (CL) is forecast for the rest of the United States, including Alaska.

(Continued from front cover)

Atlantic Coastal Plain, where unfavorably dry conditions maintained the threat of wildfire activity and continued to stress winter grains. In contrast, more than 2 inches of rain soaked the previously dry **southern Appalachians**. Farther west, unusually mild weather (6 to 14°F above normal) prevailed across the **Corn Belt**. However, showery conditions prevailed in soft red and white winter wheat areas from the **Ohio Valley to the lower Great Lakes region**, leaving some lowlands flooded and some fields with standing water. Mild weather also prevailed on the **northern and central Plains**, although winter wheat remained dormant. However, occasional high winds on the drought-affected **northern Plains** maintained an inadequate snow cover for protection against potential cold weather and caused localized soil erosion. Across the **southern half of the Plains**, meanwhile, significant precipitation was confined to easternmost wheat areas, leaving pockets of dryness in **Kansas** and **Oklahoma**. In the **West**, colder air edged into **California** by week's end, bringing a minor freeze to **San Joaquin Valley** citrus areas. **San Joaquin Valley** low temperatures generally ranged from 28 to 32°F on December 16. Cold weather also prevailed in the **Southwest**, where weekly temperatures averaged as much as 10°F below normal. Farther north, wet weather continued to ease long-term drought and boost high-elevation snow packs in **northern California**, the **Great Basin**, the **Pacific Northwest**, and the **northern Rockies**.

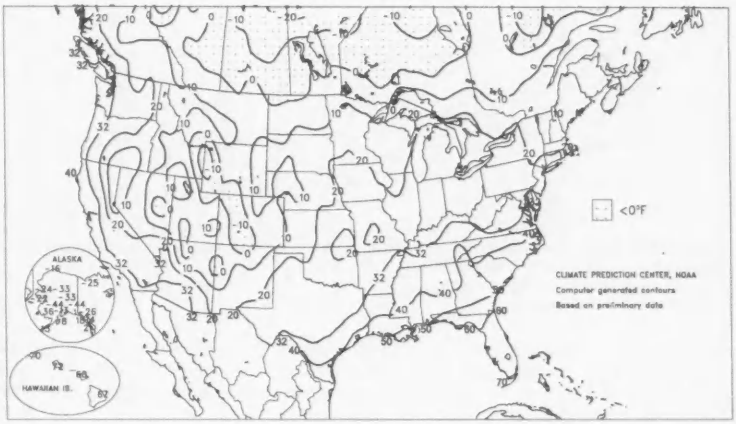
Departure of Average Temperature from Normal (°F)

DEC 9 - 15, 2001



Extreme Minimum Temperature (°F)

DEC 9 - 15, 2001



Record warmth was most persistent in the **Southeast**, where **Tampa, FL**, posted a daily-record high of 85°F on December 12. In fact, Tampa broke their December record of 12 consecutive high at or above 80°F (set in 1971 and 1972), attaining at least 80°F on each of the first 15 days of the month. Meanwhile, streaks of above-normal average temperatures reached 49 days (October 28 - December 15) in **Minneapolis, MN**, and 46 days (October 31 - December 15) in **Marquette, MI**. Temperatures in **Des Moines, IA**, averaged 40.3°F during the first 15 days of the month, on a pace to break their December 1889 record of 39.6°F. In **Chicago, IL**, high temperatures reached 40°F on every autumn day through December 13 (the high only reached 38°F on December 14), breaking their record set in 1963, when the high first failed to reach 40°F on December 2. Several **Midwestern** locations, including **Madison, WI**, set or extended records for their latest first measurable snowfall. **Madison's** previous record was set on December 15, 1999, when a 0.9-inch snowfall marked their first accumulation of the season.

In contrast, heavy snow continued to accumulate across the **West**. Early- to midweek snowfall totaled 16 inches at the north rim of the **Grand Canyon, AZ**. Farther north, 48-hour snowfall totals from December 12-14 were estimated as high as 45.0 inches at **Elk Butte** in **Clearwater County, ID**, and 28.5 inches at **Twin Lakes** in **Ravalli County, MT**. According to the California Department of Water Resources, the water equivalent of the **Sierra Nevada** snow pack climbed to 12 inches (nearly 140 percent of normal) by December 15, up from about 5 inches at the end of November. Meanwhile in **Seattle, WA**, the October 1 - December 15 precipitation total, 16.51 inches (138 percent of normal), exceeded their October 2000 - March 2001 sum of 16.28 inches (58 percent). High winds accompanied the **Western** storminess, resulting in peak gusts to 79 mph in **Florence, OR**, on December 13, and 54 mph in **Red Bluff, CA**, on December 14.

Farther east, 24-day (November 24 - December 17) rainfall in **western Tennessee** reached 20.03 inches in **Memphis** and 17.93 inches in **Dyersburg**. In **Arkansas**, **Little Rock** netted 3.68 inches on December 16, their highest 1-day total since August 18, 1997. The rain also boosted **Little Rock's** yearly total above their annual normal of 49.25 inches for the first time since 1997. Elsewhere in **Arkansas**, **Texarkana** noted consecutive daily-record rainfalls on December 15 and 16, totaling 4.96 inches.

Late in the week, a storm system departed the **Great Lakes and Northeastern States**, leaving a band of generally light snow and gusty winds. Storm-total (December 14-15) snowfall reached 3.0 inches in **Springfield, IL**, and 4.5 inches in **Burlington, VT**. Peak wind gusts in the storm's wake reached 58 mph in **Columbus, OH**. Before cooler air arrived in the **East**, Friday's highs of 78°F in **Charleston, SC**, and 75°F in **Norfolk, VA**, were among more than a dozen daily records. Meanwhile, cold air settled into the **West** at week's end, resulting in a daily-record low (-10°F on December 15) in **Eureka, NV**. A day later, a minor freeze struck **California's San Joaquin Valley**, where low temperatures included 28°F in **Delano** and 31°F in **Bakersfield**.

Cold weather (as much as 15°F below normal) intensified across **southern and western Alaska**, but near-normal temperatures returned elsewhere. Heavy snow preceded the arrival of bitterly cold conditions in **southwestern Alaska**, where **King Salmon** received 9.1 inches of snow from December 8-12, followed by a daily-record low of -35°F on December 15. In **Anchorage, AK**, temperatures fell below 0°F on 10 of the first 15 days in December, including a low of -13°F on December 14, following a record-setting 682-day spell (January 18, 2000 - November 30, 2001) without sub-zero cold. Meanwhile, a disturbance drifted westward across the **Hawaiian islands**, triggering locally heavy showers. Some of the heaviest precipitation fell on December 12-13, when 24-hour totals on the **Big Island** reached 3.45 inches in **Glenwood** and 2.75 inches in **Piihonua**. Elsewhere, rainfall during the same period included 2.36 inches in **Pukalani, Maui**, and 1.67 inches at **Wheeler Air Force Base** on **Oahu**.

Weather Data for Selected Locations in the Delta and the Bootheel

Weather Data for the Week Ending December 15, 2001

Data provided by the Mississippi State Delta Research and Extension Center (DREC), the Southern Regional Climate Center (SRCC), and the University of Missouri.

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							4-INCH SOIL TEMP, °F		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL IN. SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
MS	BATESVILLE [X]	57	43	66	33	50	6	4.53	3.24	2.30	6.57	241	62.46	122	--	--	0	0	3	2
	CLARKSDALE [X]	54	42	63	38	48	3	5.62	4.43	3.00	7.72	303	--	--	--	--	0	0	2	2
	CLEVELAND [X]	58	42	66	38	50	4	4.04	2.92	1.95	4.98	213	62.86	138	--	--	0	0	6	2
	GREENVILLE [X]	58	43	65	38	51	3	5.43	4.33	2.32	6.81	268	64.56	134	--	--	0	0	3	3
	GREENWOOD [X]	60	43	68	34	52	5	5.17	4.03	3.63	5.89	238	62.10	130	--	--	0	0	3	2
	INDIANOLA 1S	57	45	65	39	51	--	4.33	--	2.53	5.20	--	64.64	--	56	51	0	0	4	2
	INVERNESS 5E	59	47	67	40	53	--	5.19	--	2.99	6.40	--	59.24	--	57	52	0	0	3	2
	LYON	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MOORHEAD [X]	60	47	68	42	54	7	4.49	3.16	2.32	5.15	181	57.11	116	--	--	0	0	2	2
	ONWARD	59	46	69	38	53	--	4.42	--	3.72	4.86	--	54.14	--	58	55	0	0	3	2
	ROLLING FORK [X]	60	44	68	39	52	5	4.23	3.04	3.42	4.23	159	48.18	99	--	--	0	0	3	2
	SCOTT	57	44	67	39	51	--	4.96	--	2.91	5.92	--	--	--	55	50	0	0	2	2
	SIDON	59	47	67	41	53	--	4.77	--	3.26	5.85	--	51.70	--	59	51	0	0	3	2
	TUNICA [X]	56	41	63	36	49	5	5.15	3.83	2.48	6.17	224	55.73	116	--	--	0	0	4	3
	TUNICA 1W	55	41	63	34	48	--	4.76	--	2.52	5.69	--	54.17	--	53	49	0	0	3	2
	VANCE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	VICKSBURG [X]	61	46	74	38	54	4	4.72	3.46	1.63	4.72	175	71.75	140	--	--	0	0	4	3
	YAZOO CITY [X]	61	47	70	38	54	5	5.34	3.94	4.64	5.34	178	61.25	118	--	--	0	0	3	2
	STONEVILLE *	57	44	65	39	51	5	5.34	4.06	2.67	6.94	241	68.57	139	58	51	0	0	4	2
MO	CARDWELL	53	40	59	31	46	5	2.47	1.36	1.07	3.81	159	40.03	80	53	49	0	1	4	3
	CHARLESTON	52	40	58	31	45	6	1.72	0.60	0.74	3.13	127	38.50	81	51	45	0	2	4	2
	CLARKTON	52	39	57	30	45	6	2.49	1.80	0.95	4.35	221	43.07	98	--	--	0	3	4	2
	DELTA	51	37	54	26	44	6	1.74	0.78	0.60	2.60	111	34.39	69	48	43	0	3	4	3
	GLENNONVILLE	52	39	58	30	45	6	1.90	1.21	0.75	3.33	169	37.76	86	51	46	0	3	4	2
	PORTAGEVILLE #1	53	41	59	33	47	7	2.00	0.86	0.92	3.77	150	42.98	88	53	46	0	0	4	2
	PORTAGEVILLE #2	55	41	66	31	47	7	1.94	0.80	0.97	3.77	150	39.04	80	53	46	0	2	5	1
	STEELE	53	42	59	34	47	6	2.12	0.87	1.15	3.30	120	45.43	90	51	46	0	0	4	1

Compiled by USDA/OCE/WAOB's Stoneville Field Office.
*** Based on 1964-93 normals.**
[X] Based on 1961-90 normals.

Delta and Bootheel Weather and Crop Summary: The Delta received rainfall amounts many times the normal, most of which fell during the mid- to late-week period. The heavy rain combined with previously saturated soils to prolong the flooding of many agricultural fields. Despite the wetness, above-normal temperatures prevailed for most of the week. Damage to winter wheat worsened, but the extent was not yet determined.

U.S. Crop Production Highlights

The following information was released by USDA's Agricultural Statistics Board on December 11, 2001. Forecasts refer to December 1.

All cotton production is forecast at 20.1 million 480-pound bales, down 1 percent from last month, but up 17 percent from 2000. The yield is expected to average 691 pounds per harvested acre, up 6 pounds from last month. Survey and ginnings data indicated decreased production forecasts in Alabama, California, Mississippi, and Texas, which more than offset increased production forecasts in Arkansas, Missouri, South Carolina, Tennessee, and Virginia. The increase in yield resulted from a decrease in Texas harvested acreage.

The **all orange** forecast for the 2001-02 crop is 12.5 million tons, unchanged from the October 1 forecast, but up 1 percent from last season's final utilization. Florida's all orange forecast remains at 231 million boxes (10.4 million tons), 3 percent higher than the previous season. Autumn weather conditions have been warm and dry, affecting fruit sizing. Early and midseason varieties in Florida are forecast at 131 million boxes (5.9 million tons), the same as the October forecast. If realized, this production will be 2 percent higher than last season. Fruit sizes are expected to be slightly smaller than the 10-season mean. Loss from droppage remains near average. Florida's Valencia forecast is 100 million boxes (4.5 million tons), unchanged from the previous forecast, but 5 percent higher than last season's final utilization. Fruit sizes are slightly below the mean. Loss from droppage is greater than the past two seasons but remains below the average. Arizona, California, and Texas orange production forecasts are carried forward from October.

National Weather Data for Selected Cities

Weather Data for the Week Ending December 15, 2001

Data Provided by Climate Prediction Center (301-763-8000, Ext. 7503)

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	60	47	67	38	54	8	3.88	2.73	2.59	3.88	160	65.75	127	98	67	0	0	4	3
	HUNTSVILLE	58	46	64	39	52	8	4.30	2.96	3.56	4.79	169	62.09	115	93	73	0	0	4	2
	MOBILE	68	53	75	47	60	6	1.23	0.02	0.80	1.27	50	53.12	87	96	82	0	0	3	1
	MONTGOMERY	63	50	69	38	57	7	1.66	0.47	0.77	1.68	67	46.02	91	10	82	0	0	4	2
AK	ANCHORAGE	16	4	29	-13	10	-7	0.12	-0.13	0.07	0.12	23	13.59	89	83	72	0	7	3	0
	BARROW	-6	-13	3	-16	-9	2	0.00	-0.03	0.00	0.01	17	4.97	113	83	81	0	7	0	0
	FAIRBANKS	-4	-20	9	-33	-12	-6	0.06	-0.13	0.05	0.06	15	8.34	80	78	75	0	7	2	0
	JUNEAU	34	28	36	14	31	3	1.17	0.18	0.31	2.47	116	57.17	110	97	93	0	7	6	0
	KODIAK	31	19	38	8	25	-6	0.62	-0.89	0.31	1.23	39	69.74	109	79	66	0	7	3	0
	NOME	2	-15	16	-22	-6	-14	0.00	-0.19	0.00	0.00	0	12.69	88	69	63	0	7	0	0
AZ	FLAGSTAFF	34	6	47	-8	20	-10	0.48	-0.07	0.28	0.85	73	17.13	79	89	41	0	7	4	0
	PHOENIX	57	42	72	36	50	-4	0.34	0.12	0.32	0.89	189	6.73	94	80	54	0	0	2	0
	TUCSON	55	36	68	27	46	-6	0.53	0.28	0.35	0.61	122	7.83	69	81	55	0	2	4	0
	YUMA	62	42	72	38	52	-5	0.00	-0.11	0.00	0.01	5	3.32	113	57	48	0	0	0	0
AR	FORT SMITH	52	37	55	26	45	4	1.54	0.82	0.61	1.92	118	36.88	93	99	68	0	3	5	1
	LITTLE ROCK	54	38	57	32	46	2	3.62	2.48	2.31	4.56	184	46.88	97	97	70	0	1	5	2
CA	BAKERSFIELD	53	36	56	33	45	-3	0.19	0.05	0.10	0.36	120	7.05	131	86	68	0	0	2	0
	FRESNO	52	37	55	32	44	-2	0.24	-0.06	0.23	0.39	60	10.46	106	90	76	0	1	2	0
	LOS ANGELES	61	47	65	43	54	-3	0.23	-0.13	0.23	0.46	60	18.77	169	63	39	0	0	1	0
	REDDING	53	35	59	29	44	-1	1.98	0.75	1.02	4.73	181	31.58	104	87	64	0	3	3	1
	SACRAMENTO	55	40	59	36	48	2	0.65	0.11	0.10	2.63	229	17.61	109	90	47	0	0	3	1
	SAN DIEGO	60	47	63	45	54	-4	0.12	-0.24	0.08	0.26	34	8.33	92	81	59	0	0	2	0
	SAN FRANCISCO	55	45	57	42	50	0	0.89	0.22	0.71	4.37	314	21.98	122	81	68	0	0	3	1
	STOCKTON	55	38	57	33	47	2	0.51	0.05	0.48	1.58	161	12.00	94	83	67	0	0	2	0
CO	ALAMOSA	32	1	39	-5	17	-1	0.02	-0.09	0.02	0.02	8	9.76	132	85	57	0	7	1	0
	CO SPRINGS	46	17	55	9	32	2	0.00	-0.11	0.00	0.00	0	14.94	93	74	21	0	7	0	0
	DENVER INTL	44	20	57	9	32	***	0.12	***	0.08	0.12	***	15.31	***	80	34	0	7	2	0
	GRAND JUNCTION	34	18	38	13	26	-4	0.09	-0.05	0.05	0.26	87	8.35	100	90	71	0	7	2	0
	PUEBLO	48	9	60	-3	28	-4	0.04	-0.07	0.04	0.04	17	11.47	104	79	39	0	7	1	0
CT	BRIDGEPORT	51	36	57	26	43	8	0.34	-0.46	0.23	0.77	44	34.07	85	87	72	0	3	2	0
	HARTFORD	44	28	52	18	36	6	0.65	-0.25	0.33	0.81	42	32.45	77	96	82	0	5	4	0
DC	WASHINGTON	56	43	67	35	49	9	0.51	-0.21	0.36	1.08	70	29.59	80	91	69	0	0	4	0
DE	WILMINGTON	55	38	63	27	46	9	0.58	-0.22	0.18	1.17	68	33.05	85	95	65	0	3	6	0
FL	DAYTONA BEACH	81	65	84	63	73	12	0.05	-0.53	0.05	0.12	10	58.06	125	10	68	0	0	1	0
	JACKSONVILLE	74	63	80	58	69	13	2.29	1.70	2.25	2.63	214	48.67	98	10	82	0	0	4	1
	KEY WEST	82	74	83	71	78	6	0.36	-0.10	0.35	1.39	136	45.30	117	89	75	0	0	2	0
	MIAMI	83	72	84	71	77	8	0.02	-0.39	0.02	1.78	196	70.60	128	88	66	0	0	1	0
	ORLANDO	83	65	84	62	74	11	0.02	-0.48	0.01	0.10	9	54.94	117	10	64	0	0	2	0
	PENSACOLA	70	57	79	52	64	10	0.15	-0.80	0.13	0.21	11	45.41	76	94	76	0	0	2	0
	TALLAHASSEE	74	61	81	57	68	14	0.04	-1.10	0.02	0.14	6	62.87	100	99	81	0	0	3	0
	TAMPA	83	70	85	67	76	13	0.00	-0.50	0.00	0.16	15	39.05	91	99	66	0	0	0	0
	WEST PALM	82	70	83	66	76	8	0.41	-0.16	0.25	1.46	110	65.40	110	93	72	0	0	2	0
GA	ATHENS	63	47	71	42	55	9	0.59	-0.32	0.53	0.59	31	38.79	82	98	79	0	0	4	1
	ATLANTA	61	47	72	42	54	9	0.86	-0.10	0.55	0.86	42	37.44	77	96	78	0	0	5	1
	AUGUSTA	66	50	75	42	58	10	0.83	0.09	0.79	0.84	55	33.45	78	97	66	0	0	4	1
	COLUMBUS	65	50	75	43	58	9	0.69	-0.43	0.47	0.71	30	37.50	78	97	67	0	0	5	0
	MACON	66	50	74	43	58	9	0.96	0.00	0.88	1.07	55	46.68	110	96	67	0	0	4	1
	SAVANNAH	70	57	80	49	64	12	0.16	-0.49	0.16	0.34	26	31.33	66	98	74	0	0	1	0
HI	HILO	77	68	80	67	73	1	6.64	3.83	3.67	11.14	179	109.8	89	91	81	0	0	7	4
	HONOLULU	81	73	83	72	77	3	0.34	-0.51	0.18	0.34	19	8.73	44	76	69	0	0	3	0
	KAHULUI	78	70	80	68	74	1	1.82	1.12	1.26	2.13	145	9.69	51	82	75	0	0	6	1
	LIHUE	79	72	80	70	76	3	0.37	-0.76	0.10	1.03	42	28.99	72	82	74	0	0	6	0
ID	BOISE	35	24	42	20	30	-1	0.43	0.13	0.35	0.94	142	8.28	73	89	74	0	7	4	0
	LEWISTON	41	31	46	27	36	1	0.17	-0.11	0.08	0.41	69	10.65	90	87	72	0	5	3	0
	POCATELLO	26	13	35	7	20	-5	0.22	-0.03	0.18	0.94	177	6.97	60	91	82	0	7	4	0
IL	CHICAGO/O'HARE	44	29	48	22	36	8	0.51	-0.08	0.42	0.54	42	45.31	131	92	68	0	6	3	0
	MOLINE	44	27	50	19	36	9	0.33	-0.19	0.29	0.43	37	39.72	105	91	67	0	6	3	0
	PEORIA	44	30	48	21	37	9	0.46	-0.11	0.35	0.59	46	36.94	105	95	74	0	6	3	0
	ROCKFORD	43	28	48	20	35	10	0.49	0.01	0.47	0.59	55	36.68	104	92	71	0	6	3	0
	SPRINGFIELD	45	30	48	20	37	6	0.60	-0.05	0.48	0.68	48	33.60	99	95	75	0	5	2	0
IN	EVANSVILLE	51	35	58	26	43	7	1.59	0.73	0.88	2.41	129	45.22	109	98	77	0	3	3	2
	FORT WAYNE	46	31	53	23	39	9	1.15	0.47	0.82	1.20	82	42.29	127	95	72	0	4	3	1
	INDIANAPOLIS	47	34	54	26	41	9	1.40	0.62	0.98	1.57	92	40.46	106	94	74	0	3	3	1
	SOUTH BEND	45	30	49	23	38	8	0.76	-0.01	0.49	0.85	51	37.41	100	92	72	0	4	4	0
IA	BURLINGTON	45	30	48	21	37	9	0.39	-0.08	0.36	0.48	46	38.16	109	93	61	0	5	3	0
	CEDAR RAPIDS	46	28	51	18	37	13	0.40	0.02	0.35	0.59	70	35.25	107	91	57	0	5	3	0
	DES MOINES	46	29	53	23	37	11	0.20	-0.11	0.19	0.64	93	28.13	87	85	68	0	6	2	0
	DUBUQUE	41	27	47	18	34	11	0.64	0.17	0.60	0.95	90	34.43	92	90	71	0	6	2	1
	SIOUX CITY	48	26	53	17	37	14	0.00	-0.19	0.00	0.12	29	30.24	119	84	67	0	6	0	0
	WATERLOO	44	26	51	19	35	13	0.08	-0.23	0.07	0.30	43	34.34	104	90	70	0	5	2	0
KS	CONCORDIA	51	30	56	23	41	10	0.06	-0.13	0.04	0.06	14	27.20	96	78	61	0	5	2	0
	DODGE CITY	52	25	58	18	39	6	0.03	-0.12	0.03	0.03	9	18.35	87	86	41	0	6	1	0
	GOODLAND	50	22	61	12	36	6	0.38	0.29	0.25	0.38	173	16.76	93	76	54	0	7	2	0
	TOPEKA	50	32	56	23	41	9	0.15	-0.18	0.08	0.15	20	42.72	124	82	62	0	4	2	0

Based on 1961-90 normals

*** Not Available

Weather Data for the Week Ending December 15, 2001

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	50	31	58	21	41	7	0.06	-0.22	0.05	0.08	13	24.49	85	86	62	0	4	2	0
KY	JACKSON	56	43	69	34	49	10	0.98	-0.03	0.37	1.80	83	34.38	72	97	63	0	0	5	0
	LEXINGTON	54	40	62	32	47	10	0.84	-0.09	0.55	1.67	84	39.11	92	93	79	0	1	4	1
	LOUISVILLE	54	40	62	30	47	9	1.10	0.25	0.67	1.94	105	43.33	102	98	75	0	2	3	1
	PADUCAH	53	38	60	27	45	7	1.71	0.61	1.01	3.07	130	49.39	105	10	71	0	3	4	2
LA	BATON ROUGE	67	48	79	41	57	4	2.83	1.57	2.79	2.83	107	60.93	105	97	63	0	0	2	1
	LAKE CHARLES	66	48	76	41	57	3	3.36	2.21	3.06	3.46	143	55.10	106	94	65	0	0	3	1
	NEW ORLEANS	69	54	79	48	62	7	1.03	-0.28	0.91	1.03	37	67.64	115	91	79	0	0	4	1
	SHREVEPORT	58	41	69	33	50	1	4.92	3.98	2.73	5.42	266	58.69	133	96	72	0	0	4	3
ME	CARIBOU	35	20	44	13	28	12	0.16	-0.59	0.16	0.30	18	28.74	82	87	59	0	7	1	0
	PORTLAND	43	26	50	17	34	6	0.65	-0.41	0.28	0.73	31	31.91	76	92	71	0	6	4	0
MD	BALTIMORE	54	39	65	27	47	9	0.57	-0.20	0.34	1.22	74	33.82	87	91	72	0	2	4	0
MA	BOSTON	47	36	57	29	41	6	0.98	0.06	0.57	1.20	60	29.81	75	93	65	0	3	4	1
	WORCESTER	42	31	49	24	37	9	0.87	-0.06	0.40	1.06	52	31.58	69	98	71	0	4	5	0
MI	ALPENA	42	28	48	24	35	10	0.35	-0.12	0.29	1.22	120	26.83	96	96	71	0	6	2	0
	GRAND RAPIDS	42	30	48	26	36	8	0.45	-0.22	0.24	0.65	44	38.98	112	96	75	0	6	3	0
	HOUGHTON LAKE	40	27	45	20	33	9	0.24	-0.21	0.21	0.38	38	28.07	103	96	85	0	6	2	0
	LANSING	43	31	48	23	37	10	0.60	0.04	0.41	0.74	61	31.47	107	95	74	0	4	3	0
	MUSKEGON	43	30	50	25	37	7	0.49	-0.21	0.20	0.70	46	34.29	110	93	77	0	5	3	0
	TRAVERSE CITY	41	27	47	21	34	8	0.20	-0.30	0.20	1.09	103	30.86	108	98	66	0	5	1	0
MN	DULUTH	34	20	40	15	27	13	0.00	-0.28	0.00	0.18	29	29.62	101	90	76	0	7	0	0
	INT'L FALLS	35	15	43	3	25	16	0.00	-0.19	0.00	0.22	54	27.51	115	88	65	0	7	0	0
	MINNEAPOLIS	40	26	47	20	33	14	0.00	-0.25	0.00	0.19	34	33.68	121	86	71	0	7	0	0
	ROCHESTER	38	25	45	16	32	14	0.12	-0.12	0.07	0.99	180	38.69	133	90	79	0	7	3	0
	ST. CLOUD	37	23	45	16	30	15	0.00	-0.19	0.00	0.08	19	28.36	105	92	71	0	7	0	0
MS	JACKSON	63	47	71	40	55	6	2.82	1.47	2.46	2.86	101	61.67	118	96	70	0	0	5	1
	MERIDIAN	64	48	71	38	56	7	3.51	2.12	3.50	3.54	122	67.20	126	98	83	0	0	2	1
	TUPELO	58	44	65	37	51	7	3.87	2.45	3.33	4.58	153	65.63	125	98	82	0	0	4	1
MO	COLUMBIA	47	32	51	23	40	7	1.05	0.46	0.78	1.05	80	40.20	106	91	68	0	3	5	1
	KANSAS CITY	47	32	53	24	40	9	0.75	0.38	0.67	0.76	94	53.48	145	88	65	0	4	2	1
	SAINT LOUIS	49	35	50	27	42	7	1.62	0.90	0.80	1.70	107	33.55	93	90	68	0	3	4	2
	SPRINGFIELD	48	33	51	18	41	5	2.02	1.26	1.09	2.05	122	43.83	105	92	68	0	3	5	2
MT	BILLINGS	39	24	51	18	32	6	0.16	-0.01	0.16	0.16	46	10.95	75	70	41	0	6	1	0
	BUTTE	30	7	39	-2	19	1	0.03	-0.06	0.01	0.06	27	10.59	89	85	50	0	7	3	0
	GLASGOW	35	13	48	5	24	8	0.00	-0.08	0.00	0.00	0	12.70	118	82	67	0	7	0	0
	GREAT FALLS	38	20	44	12	29	4	0.03	-0.16	0.03	0.03	8	9.85	67	75	38	0	7	1	0
	HAVRE	39	14	49	3	27	9	0.01	-0.10	0.01	0.01	4	6.90	63	75	53	0	7	1	0
	KALISPELL	34	17	39	5	25	2	0.14	-0.25	0.12	0.38	47	12.36	79	83	74	0	7	2	0
	MISSOULA	34	22	41	19	28	4	0.17	-0.08	0.13	0.31	60	12.47	97	90	75	0	7	3	0
NE	GRAND ISLAND	48	26	55	18	37	11	0.01	-0.16	0.01	0.04	10	23.05	94	84	60	0	6	1	0
	LINCOLN	50	27	55	17	39	13	0.02	-0.19	0.02	0.19	40	32.09	115	80	56	0	6	1	0
	NORFOLK	48	26	55	13	37	13	0.00	-0.17	0.00	0.01	3	27.49	111	85	55	0	6	0	0
	NORTH PLATTE	45	14	59	4	30	5	0.08	-0.03	0.08	0.08	33	23.72	124	95	46	0	7	1	0
	OMAHA	49	28	55	22	39	13	0.01	-0.23	0.01	0.36	67	28.15	96	83	61	0	6	1	0
	SCOTTSBLUFF	45	17	59	13	31	4	0.00	-0.14	0.00	0.00	0	13.04	87	82	52	0	7	0	0
	VALENTINE	42	18	56	11	30	7	0.00	-0.08	0.00	0.00	0	20.58	114	88	62	0	7	0	0
NV	ELY	29	3	39	-8	16	-10	0.07	-0.10	0.07	0.16	46	6.23	64	84	65	0	7	1	0
	LAS VEGAS	52	34	59	31	43	-3	0.00	-0.08	0.00	0.00	0	3.85	98	53	36	0	3	0	0
	RENO	42	27	51	17	35	2	0.13	-0.09	0.11	1.32	281	3.88	55	73	60	0	7	2	0
	WINNEMUCCA	38	20	47	16	29	-1	0.38	0.19	0.20	0.56	127	4.53	58	89	74	0	7	3	0
NH	CONCORD	41	22	47	12	31	6	0.93	0.19	0.52	1.07	66	30.02	86	98	66	0	7	4	1
NJ	NEWARK	54	39	63	30	46	9	0.25	-0.53	0.13	0.97	57	30.20	72	87	69	0	1	3	0
NM	ALBUQUERQUE	42	25	53	19	34	-2	0.07	-0.04	0.05	0.07	29	6.35	74	74	46	0	7	2	0
NY	ALBANY	42	25	50	17	34	6	0.89	0.21	0.45	1.20	81	28.03	81	96	73	0	5	4	0
	BINGHAMTON	42	28	52	21	35	8	0.53	-0.17	0.37	0.90	59	32.92	93	98	81	0	5	3	0
	BUFFALO	46	32	54	27	39	9	1.02	0.16	0.87	1.08	58	29.75	81	97	68	0	6	4	1
	ROCHESTER	47	30	58	24	38	8	0.87	0.24	0.77	1.01	73	28.47	93	94	68	0	6	4	1
	SYRACUSE	47	31	58	25	39	10	0.77	0.02	0.65	0.96	58	33.09	88	96	67	0	5	4	1
NC	ASHEVILLE	58	43	67	39	51	11	1.37	0.57	1.02	1.38	79	33.51	73	95	79	0	0	4	1
	CHARLOTTE	58	47	68	41	53	10	1.32	0.55	1.25	1.32	80	25.60	62	10	71	0	0	5	1
	GREENSBORO	54	43	67	37	49	8	1.34	0.58	1.28	1.35	84	28.99	71	95	74	0	0	3	1
	HATTERAS	67	56	71	52	62	12	1.24	0.24	0.91	1.44	67	28.56	53	96	76	0	0	6	1
	RALEIGH	58	46	73	41	52	9	1.43	0.71	1.16	1.44	94	34.42	87	90	77	0	0	4	1
	WILMINGTON	70	52	78	44	61	12	1.02	0.21	0.50	1.02	60	37.71	72	99	68	0	0	5	1
ND	BISMARCK	35	16	51	11	25	10	0.00	-0.11	0.00	0.06	25	21.31	140	91	71	0	7	0	0
	DICKINSON	33	16	45	9	25	7	0.00	-0.08	0.00	0.12	67	18.51	116	92	59	0	7	0	0
	FARGO	33	19	39	10	26	13	0.00	-0.14	0.00	0.00	0	20.10	105	90	76	0	6	0	0
	GRAND FORKS	32	10	37	3	21	9	0.00	-0.14	0.00	0.08	27	21.40	119	94	79	0	7	0	0
	JAMESTOWN	33	17	45	9	25	11	0.00	-0.11	0.00	0.05	21	20.16	121	95	70	0	7	0	0
	WILLISTON	30	10	41	-1	20	6	0.00	-0.14	0.00	0.60	222	13.74	103	87	77	0	7	0	0
OH	AKRON-CANTON	49	34	58	27	42	10	0.61	-0.08	0.34	0.77	51	31.34	89	96	80	0	4	4	0
	CINCINNATI	52	36	61	26	44	10	0.64	-0.09	0.37	1.42	89	43.92	110	95	76	0	3	3	0
	CLEVELAND	48	33	57	24	40	8	0.92	0.19	0.75	0.93	59	32.76	93	99	81	0	4	4	1
	COLUMBUS	51	36	61	29	44	11	0.45	-0.22	0.24	0.79	54	34.66	94	96	78	0	3	3	0
	DAYTON	50	34	58	24	42	9	0.81	0.12	0.63	1.10	73	39.67	113	97	74	0	3	3	1
	MANSFIELD	48	32	57	23	40	9	0.67	-0.06	0.38	0.70	43	32.17	84	99	70	0	4	3	1

Based on 1961-90 normals

*** Not Available

Weather Data for the Week Ending December 15, 2001

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	47	31	54	22	39	10	0.93	0.24	0.66	0.97	64	32.88	104	97	76	0	5	4	1
	YOUNGSTOWN	49	32	58	24	41	10	0.43	-0.26	0.18	0.50	33	27.89	78	96	75	0	4	4	0
OK	OKLAHOMA CITY	51	32	58	23	41	1	0.28	-0.05	0.10	0.30	41	28.46	87	95	67	0	4	4	0
	TULSA	51	36	55	24	43	3	0.56	0.05	0.20	0.56	48	27.53	70	93	69	0	3	4	0
OR	ASTORIA	50	39	54	34	45	2	4.40	2.00	1.79	7.78	151	56.84	93	96	82	0	0	7	4
	BURNS	31	12	39	2	22	-4	0.33	0.06	0.17	0.73	124	8.09	86	93	78	0	7	5	0
	EUGENE	48	38	53	34	43	2	1.65	-0.31	1.06	4.23	100	25.53	57	94	85	0	0	7	1
	MEDFORD	43	34	48	29	38	0	1.13	0.36	0.75	2.82	171	13.51	79	95	78	0	2	7	1
	PENDLETON	44	32	53	28	38	3	0.28	-0.08	0.12	0.45	56	10.16	91	87	76	0	5	5	0
	PORTLAND	47	40	53	35	44	3	1.97	0.56	0.78	4.56	153	28.42	86	93	84	0	0	7	1
	SALEM	48	38	52	34	43	3	2.19	0.63	1.34	5.82	174	31.52	88	95	84	0	0	7	1
PA	ALLENTOWN	51	32	60	21	42	9	0.45	-0.35	0.22	0.46	26	34.55	83	91	69	0	5	4	0
	ERIE	48	33	57	29	40	7	0.80	-0.05	0.68	0.85	45	30.83	77	91	78	0	5	3	1
	MIDDLETOWN	52	34	63	26	43	8	0.61	-0.13	0.47	1.21	74	25.10	65	96	69	0	5	4	0
	PHILADELPHIA	54	40	63	31	47	10	0.50	-0.27	0.22	1.17	71	30.08	76	91	67	0	1	5	0
	PITTSBURGH	52	34	65	27	43	11	0.22	-0.44	0.14	0.56	39	33.86	96	94	63	0	4	3	0
	WILKES-BARRE	48	32	58	22	40	9	0.10	-0.49	0.06	0.46	35	26.83	77	96	72	0	5	3	0
	WILLIAMSPORT	48	32	57	25	40	8	0.35	-0.35	0.18	0.98	63	34.47	88	96	69	0	5	3	0
RI	PROVIDENCE	47	33	53	23	40	6	0.67	-0.33	0.31	0.79	36	38.44	89	98	80	0	3	6	0
SC	BEAUFORT	70	56	77	50	63	11	0.08	-0.62	0.06	0.12	8	43.25	87	10	70	0	0	3	0
	CHARLESTON	70	55	78	50	63	11	1.49	0.79	1.24	1.49	103	39.82	80	99	72	0	0	5	1
	COLUMBIA	64	51	73	44	57	9	1.01	0.23	0.86	1.02	63	27.83	58	95	67	0	0	3	1
	GREENVILLE	60	46	68	40	53	9	1.36	0.42	1.15	1.36	69	39.50	80	95	72	0	0	4	1
SD	ABERDEEN	33	20	37	11	26	10	0.00	-0.09	0.00	0.00	0	22.56	123	90	81	0	6	0	0
	HURON	36	24	41	19	30	11	0.00	-0.11	0.00	0.00	0	26.75	135	94	73	0	6	0	0
	RAPID CITY	43	19	58	11	31	6	0.00	-0.11	0.00	0.00	0	14.46	88	78	44	0	7	0	0
	SIOUX FALLS	42	25	50	20	33	14	0.00	-0.17	0.00	0.02	5	30.10	128	88	71	0	6	0	0
TN	BRISTOL	58	40	70	37	49	10	2.04	1.27	0.98	2.48	152	40.83	105	98	60	0	0	5	2
	CHATTANOOGA	60	47	67	38	53	11	3.40	2.22	1.79	3.48	139	53.40	105	90	70	0	0	4	2
	KNOXVILLE	58	46	69	43	52	11	2.90	1.87	1.30	3.50	161	41.37	92	94	67	0	0	5	2
	MEMPHIS	57	44	65	37	51	7	4.43	3.08	2.74	5.19	178	60.99	124	94	70	0	0	3	2
	NASHVILLE	55	43	63	34	49	8	1.44	0.37	0.67	2.69	117	48.28	107	95	75	0	0	4	2
TX	ABILENE	58	36	67	24	47	1	0.00	-0.24	0.00	0.00	0	20.87	87	85	59	0	3	0	0
	AMARILLO	55	25	64	19	40	3	0.09	0.00	0.08	0.09	41	18.53	96	85	36	0	7	2	0
	AUSTIN	60	38	70	27	49	-3	1.88	1.44	1.12	4.19	436	39.00	126	98	64	0	2	4	1
	BEAUMONT	67	48	74	41	58	3	0.65	-0.42	0.51	0.89	39	67.66	124	98	65	0	0	3	1
	BROWNSVILLE	72	56	82	45	64	1	0.09	-0.19	0.09	0.94	159	16.79	65	89	67	0	0	1	0
	CORPUS CHRISTI	67	52	76	42	59	0	0.33	0.05	0.18	1.70	288	39.47	134	94	75	0	0	4	0
	DEL RIO	61	40	76	32	51	-2	0.19	0.05	0.16	0.36	116	9.62	54	87	59	0	2	3	0
	EL PASO	51	27	57	22	39	-6	0.05	-0.09	0.05	0.05	18	4.21	49	76	32	0	6	1	0
	FORT WORTH	56	37	66	29	47	-1	0.81	0.40	0.42	1.34	147	36.21	110	92	52	0	3	3	0
	GALVESTON	67	55	73	48	61	4	0.75	-0.05	0.37	1.11	65	57.26	141	91	64	0	0	3	0
	HOUSTON	67	46	75	37	56	2	4.23	3.45	1.64	5.47	324	70.54	159	93	72	0	0	3	3
	LUBBOCK	55	29	63	23	42	1	0.02	-0.11	0.02	0.02	7	15.38	84	82	47	0	6	1	0
	MIDLAND	55	33	58	25	44	-1	0.06	-0.08	0.05	0.06	20	9.89	67	86	45	0	3	2	0
	SAN ANGELO	59	33	65	25	46	-1	0.08	-0.10	0.08	0.08	20	18.49	92	86	58	0	4	1	0
	SAN ANTONIO	61	42	66	31	51	-2	1.39	1.05	0.97	3.25	411	36.57	121	95	53	0	1	4	1
	VICTORIA	66	47	74	38	57	1	0.73	0.26	0.63	3.24	324	42.50	117	92	70	0	0	3	1
	WACO	57	38	69	29	48	-1	2.24	1.81	1.50	2.67	281	34.33	111	92	73	0	1	4	1
	WICHITA FALLS	54	33	62	25	44	0	0.18	-0.12	0.17	0.18	28	16.53	58	83	65	0	4	2	0
UT	SALT LAKE CITY	33	21	40	9	27	-3	0.39	0.06	0.27	0.96	135	14.19	92	91	65	0	7	5	0
VT	BURLINGTON	42	25	52	16	34	10	0.66	0.09	0.32	0.92	72	22.92	69	98	68	0	6	5	0
VA	LYNCHBURG	53	39	65	29	46	7	2.10	1.36	1.22	2.35	148	31.66	81	94	74	0	1	4	2
	NORFOLK	63	51	75	46	57	12	1.42	0.71	1.26	1.42	96	32.95	77	92	71	0	0	2	1
	RICHMOND	58	43	71	31	50	9	0.93	0.19	0.75	0.99	63	30.81	74	96	72	0	1	5	1
	ROANOKE	54	41	68	33	47	8	1.60	0.91	1.39	1.86	126	24.45	62	89	73	0	0	4	1
	WASH/DULLES	54	36	67	25	45	9	0.68	-0.06	0.31	1.20	75	36.64	95	92	74	0	3	5	0
WA	OLYMPIA	46	37	51	29	42	4	3.37	1.53	2.08	7.40	187	45.23	97	95	89	0	1	7	2
	QUILLAYUTE	47	37	50	33	42	2	7.63	4.11	2.93	13.29	176	93.32	96	93	84	0	0	7	4
	SEATTLE-TACOMA	45	37	51	35	41	0	2.69	1.34	1.75	4.16	143	35.10	103	95	84	0	0	7	1
	SPOKANE	35	24	40	16	29	1	0.86	0.31	0.69	1.53	130	13.18	86	94	84	0	7	3	1
	YAKIMA	40	26	51	21	33	3	0.15	-0.18	0.06	0.90	134	6.62	92	94	82	0	7	4	0
WV	BECKLEY	51	39	67	29	45	10	0.99	0.25	0.54	1.58	101	35.13	89	95	78	0	1	4	1
	CHARLESTON	58	41	71	32	50	12	0.40	-0.38	0.23	1.54	91	40.85	100	97	58	0	2	4	0
	ELKINS	55	35	67	22	45	12	0.41	-0.39	0.23	1.06	62	38.47	89	97	58	0	3	3	0
	HUNTINGTON	57	40	68	32	49	11	0.55	-0.22	0.32	1.48	90	34.06	86	97	66	0	2	5	0
WI	EAU CLAIRE	41	24	49	17	32	14	0.03	-0.22	0.03	0.57	102	35.82	115	92	54	0	7	1	0
	GREEN BAY	41	24	49	19	33	12	0.43	0.07	0.31	0.96	119	27.40	97	94	64	0	7	2	0
	LA CROSSE	42	26	50	19	34	12	0.00	-0.30	0.00	0.40	60	31.78	106	94	57	0	6	0	0
	MADISON	41	26	48	17	34	11	0.49	0.05	0.48	0.68	71	38.05	127	91	64	0	6	2	0
	MILWAUKEE	44	29	49	22	36	10	0.32	-0.23	0.28	0.57	48	36.01	113	86	67	0	6	2	0
WY	CASPER	34	15	44	9	25	1	0.01	-0.15	0.01	0.01	3	6.72	55	76	52	0	7	1	0
	CHEYENNE	40	20	53	13	30	2	0.02	-0.07	0.02	0.03	14	13.14	93	59	36	0	7	1	0
	LANDER	30	13	40	8	22	1	0.12	-0.02	0.12	0.16	53	5.35	42	83	65	0	7	1	0
	SHERIDAN	41	15	55	7	28	5	0.03	-0.14	0.03	0.03	9	10.87	77	79	54	0	7	1	0

Based on 1961-90 normals

*** Not Available

NOTE: These data are preliminary and subject to change. In the past, precipitation totals from a number of stations were incomplete.

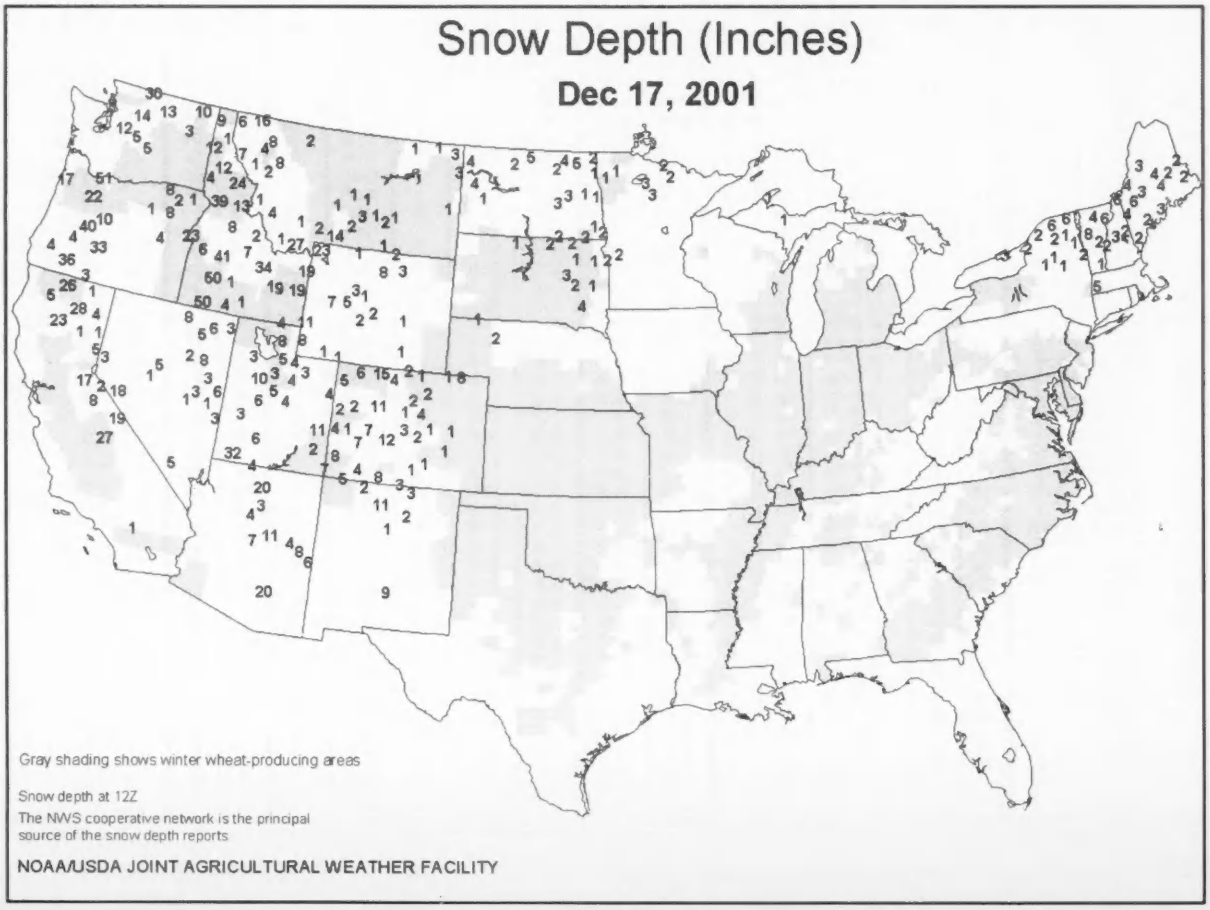
National Agricultural Summary

December 10 - 16, 2001

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Above-normal temperatures continued to support development of winter crops and forages across most of the Nation. In the southern Great Plains and the Southwest, below-normal temperatures prevailed, but growth of winter crops was only slightly hindered. Many winter wheat fields in the lower Mississippi Valley and adjacent areas of the southern Great Plains, Southeast, and Ohio Valley were stressed by heavy rains that produced saturated soils, standing water, and flooding along rivers and streams. Moisture supplies were mostly adequate for winter wheat development in the eastern Corn Belt, although some areas were unfavorably wet. In the Great Plains, moisture reserves remained low in many areas, especially on the northern High Plains. In the central Great Plains and southern High Plains, light showers maintained topsoil moisture supplies, and provided short term crop requirements. Light showers also provided much-needed moisture for winter crops on the Atlantic Coastal Plain. Heavy precipitation continued in the Pacific Northwest, while mostly dry weather aided field and orchard work in California's valleys. Dry weather also supported fieldwork in Florida.


Snow Depth (Inches)
Dec 17, 2001
Gray shading shows winter wheat-producing areas
Snow depth at 12Z
The NWS cooperative network is the principal source of the snow depth reports
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

International Weather and Crop Summary

December 9 - 15, 2001

International Weather and Crop Highlights and Summaries provided by USDA/WAOB

HIGHLIGHTS

FSU-WESTERN: Widespread snow provided a fresh snow cover in most areas, protecting winter grains from bitterly cold weather.

MIDDLE EAST: A wet weather pattern continued to dominate Turkey, increasing the potential for local crop damage.

EUROPE: Cold weather enveloped much of the continent, however, temperatures in eastern Europe were not likely cold enough to cause widespread winterkill.

EASTERN ASIA: Seasonably cold weather caused winter wheat to enter dormancy across the North China Plain, and much needed rain favored winter crops across the Yangtze Valley and southern China.

AUSTRALIA: Drier weather brought some relief to unharvested winter crops in Western Australia and the southeast.

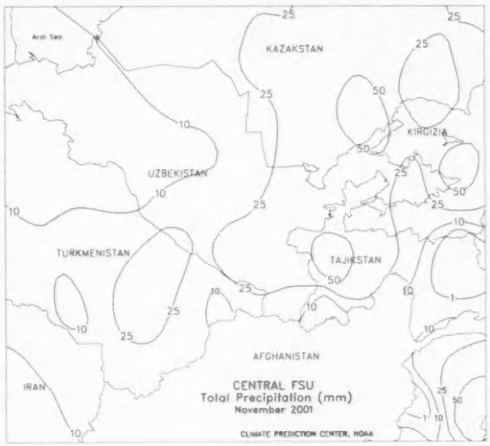
SOUTHEAST ASIA: The remnants of Tropical Storm Kajiki brought heavy rains to central Vietnam, hampering rice transplanting.

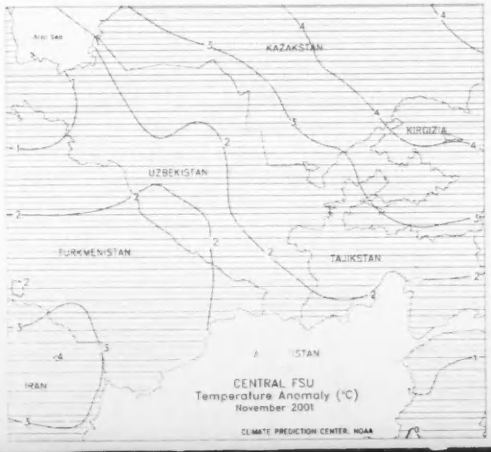
SOUTH ASIA: Conditions remained favorable for summer crop harvesting and winter crop establishment.

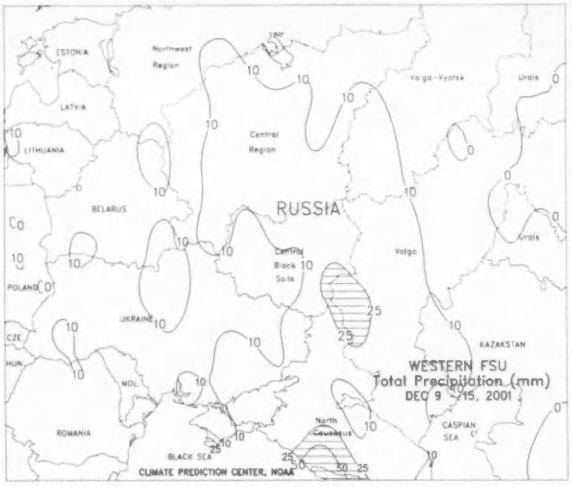
SOUTH AMERICA: In western Argentina continued dry, warm weather reduced topsoil moisture and increased stress on vegetative summer crops. Across southern Brazil, widespread showers (15-100 mm or more) continued to maintain adequate to abundant soil moisture for soybeans, corn, sugarcane, coffee, and oranges.

SOUTH AFRICA: Wet weather persisted in the western corn belt but conditions were generally more favorable for summer crop development elsewhere.

NORTHWESTERN AFRICA: The first substantial rains of the growing season in Morocco likely prompted widespread winter grain planting.

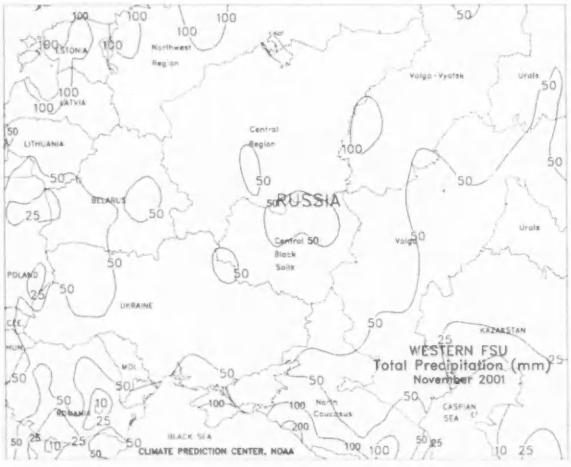


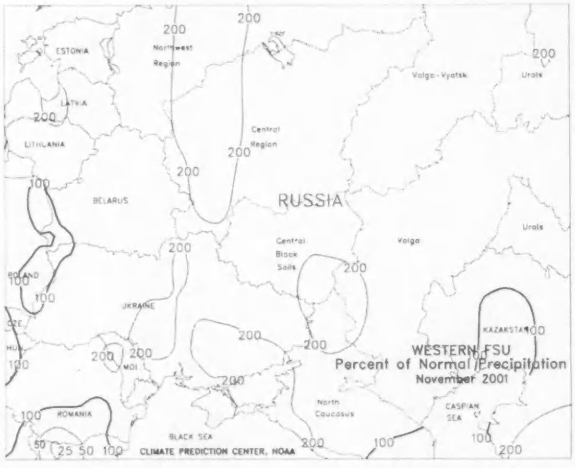


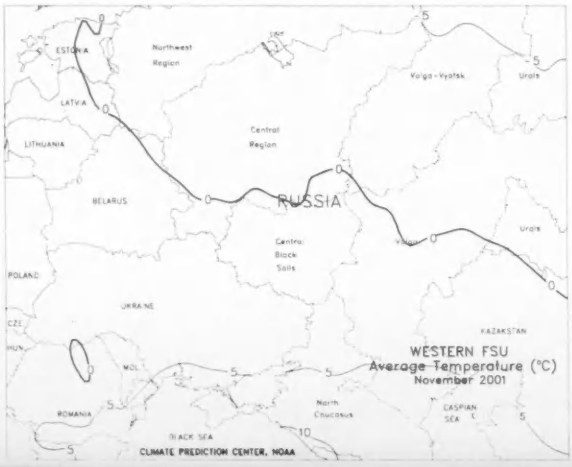


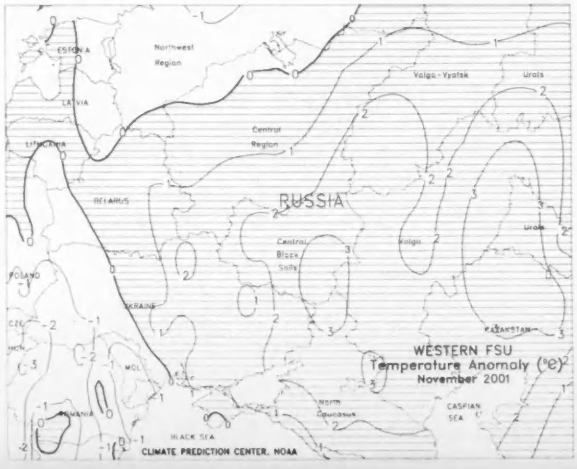
FSU-WESTERN

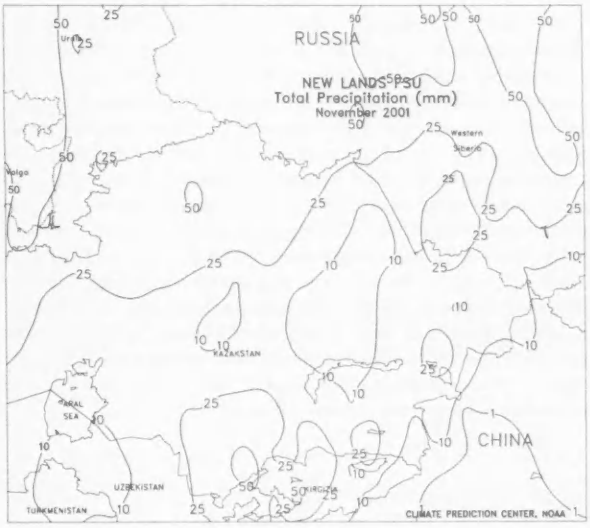
Periods of snow occurred in most areas during the week, increasing protective snow cover. The greatest amounts of moisture (10-37 mm of liquid equivalent) spread from the North Caucasus region in Russia and the eastern Ukraine, northward through the middle Volga Valley into northern Russia. A fresh snow cover in most areas provided adequate protection from a bitterly cold air mass that remained well entrenched over the region. Extreme minimum temperatures fell at or below -20 degrees C as far south as northern Ukraine and the northern tip of the North Caucasus, and as far west as the Baltics. The lowest temperatures along the Black Sea Coast ranged from -15 to -5 degrees C. Weekly temperatures averaged 4 to 9 degrees C below normal in most areas. In November, mild weather and above-normal precipitation favored winter grains in most areas. Above-normal temperatures prevailed over most of Russia and the eastern two-thirds of Ukraine, while near-normal temperatures were observed in western Ukraine, Belarus, and the Baltics. Although the weather was unseasonably mild in northern Russia, temperatures remained low enough to keep winter grains dormant. Winter wheat in major growing areas of Ukraine and southern Russia entered dormancy during the month. In southern Russia, winter wheat in most areas was well established prior to dormancy. In Ukraine, a lack of planting moisture in south-central and southeastern areas likely caused spotty germination and limited plant establishment, making winter wheat more susceptible to potential winterkill conditions. Although significant precipitation (25-50 mm) boosted soil moisture in these areas during the second half of November, cooler weather prevented further crop establishment.





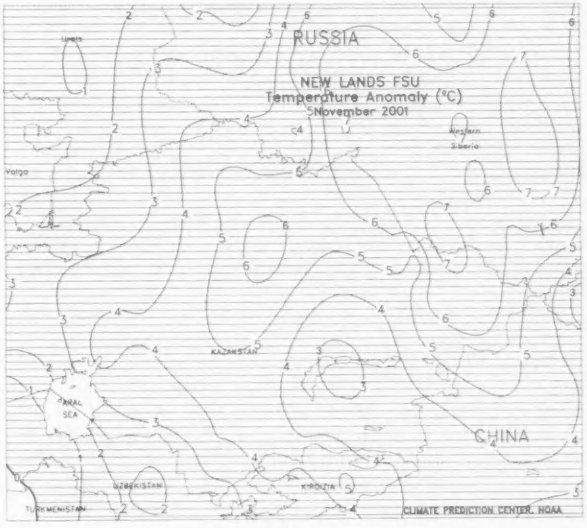





RUSSIA
NEW LANDS FSU
Total Precipitation (mm)
November 2001
Western Siberia
Volga
KAZAKHSTAN
ARAL SEA
UZBEKISTAN
TURKMENISTAN
KIRGIZIA
CHINA
CLIMATE PREDICTION CENTER, NOAA

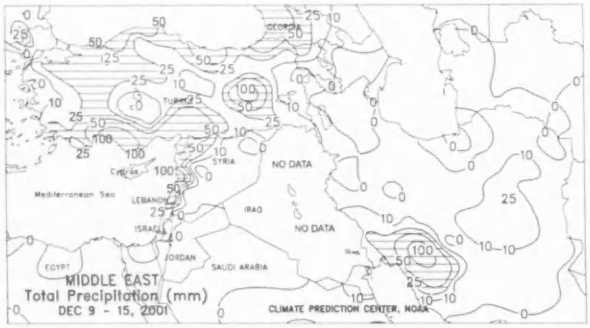
RUSSIA
NEW LANDS FSU
Percent of Normal Precipitation
November 2001
Western Siberia
Volga
KAZAKHSTAN
ARAL SEA
UZBEKISTAN
TURKMENISTAN
KIRGIZIA
CHINA
CLIMATE PREDICTION CENTER, NOAA

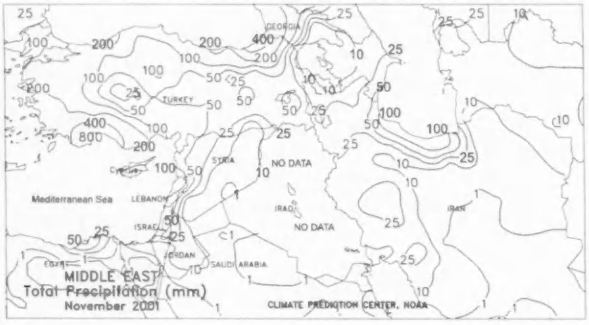
RUSSIA
NEW LANDS FSU
Average Temperature (°C)
November 2001
Western Siberia
Volga
KAZAKHSTAN
ARAL SEA
UZBEKISTAN
TURKMENISTAN
KIRGIZIA
CHINA
CLIMATE PREDICTION CENTER, NOAA

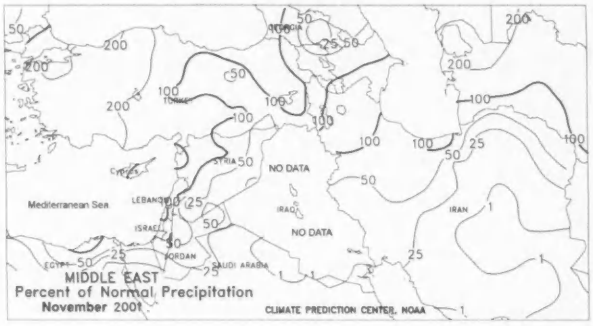

RUSSIA
NEW LANDS FSU
Temperature Anomaly (°C)
November 2001
Western Siberia
Volga
KAZAKHSTAN
ARAL SEA
UZBEKISTAN
TURKMENISTAN
KIRGIZIA
CHINA
CLIMATE PREDICTION CENTER, NOAA

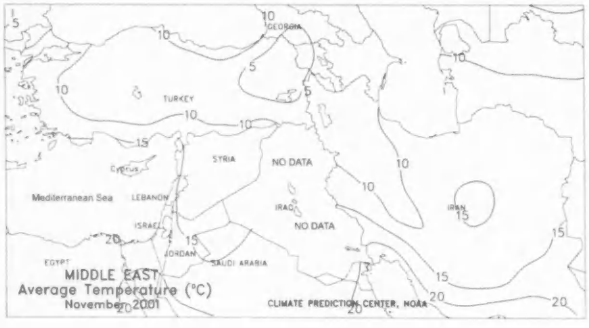
MIDDLE EAST

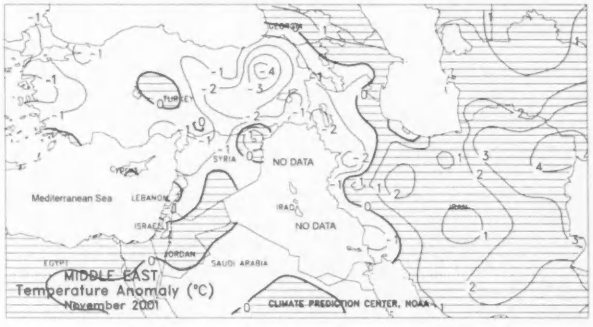
The pattern of widespread, locally heavy rain (10-50 mm, locally exceeding 100 mm) persisted across Turkey, further increasing long-term moisture reserves for winter wheat. However, the worsening flood situation along the southern coast increased the potential for local damage to unharvested summer crops, including cotton. Heavy rain was also recorded in western Syria, but amounts diminished drastically to the east, with little or no rain from eastern Syria to northwestern Iran. Elsewhere in Iran, pockets of heavy rain (25-100 mm or more) continued in the southwest with lighter showers (5-10 mm or more) streaming into wheat areas of the northeast. Above-normal temperatures fostered late winter wheat development from southeastern Turkey through Iran. In contrast, colder-than-normal weather in western Turkey helped Anatolian crops enter dormancy. In November, stormy weather dominated the eastern Mediterranean, bringing heavy rain to much of western Turkey. Flooding was reported in southern coastal areas, and some damage was possible to unharvested cotton and other summer crops. Somewhat lighter showers benefited vegetative to semi-dormant winter wheat elsewhere in Turkey, as well as in neighboring locations in Syria. Beneficial showers finally developed across Iran later in the month, boosting topsoil moisture for late crop establishment but doing little to offset long-term moisture deficits. Temperatures averaged below normal in eastern Turkey and northwestern Iran, but near normal in most other areas. The exception was northeastern Iran, where above-normal temperatures accompanied chronic dryness.





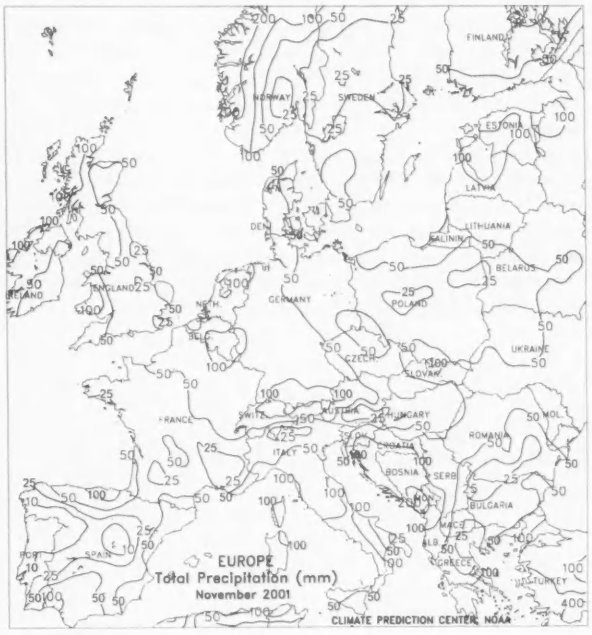


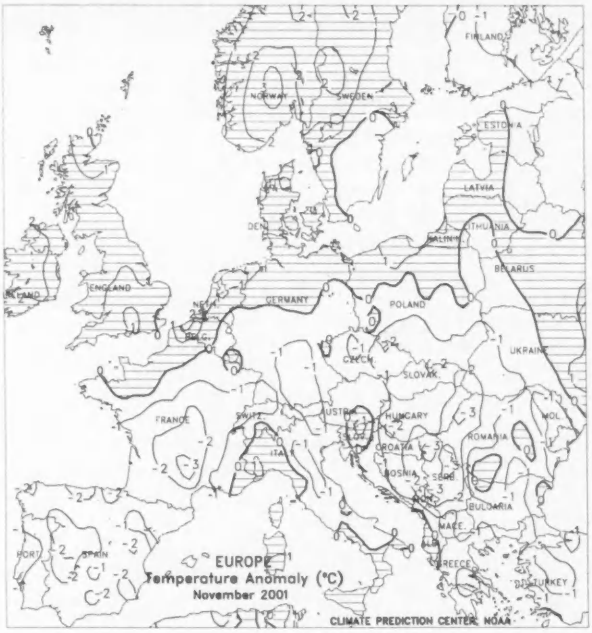




EUROPE

Scattered showers (3-30 mm or more) helped durum wheat development in southern Spain and southern Italy, while mostly dry weather (less than 5 mm) prevailed elsewhere in western Europe. Seasonable temperatures across the southern Iberian peninsula also aided crop development. In contrast, temperatures averaged 2 to 5 degrees C below normal throughout the remainder of western Europe, halting further crop development. In eastern Europe, light snow (3-37 mm liquid equivalent) in most areas increased the protective snow cover for dormant winter grains. Very cold weather enveloped this region as well, with temperatures averaging 3 to 9 degrees C below normal. Although minimum temperatures ranged from -21 to -9 degrees C, temperatures were not likely cold enough to cause widespread winterkill. In November, near- to below-normal rainfall in England, France, and northern Spain favored well-established winter grains. Widespread precipitation maintained abundant moisture supplies in north-central and northeastern Europe. Scattered precipitation in south-central and southeastern Europe came too late to help winter grain establishment in southern Romania and Bulgaria, but helped durum wheat development in southern Italy. Cold weather caused winter grains in north-central and eastern Europe to enter dormancy.

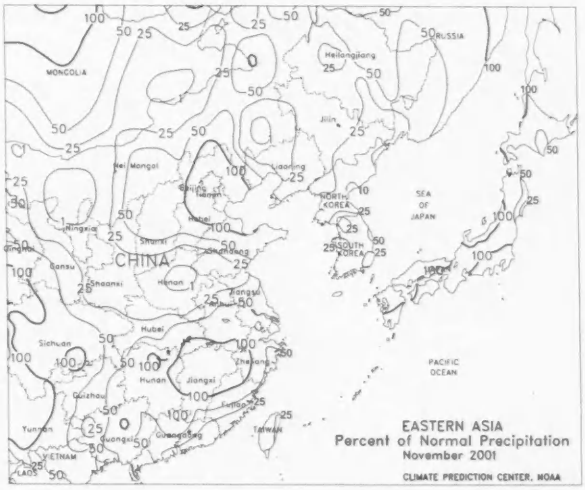


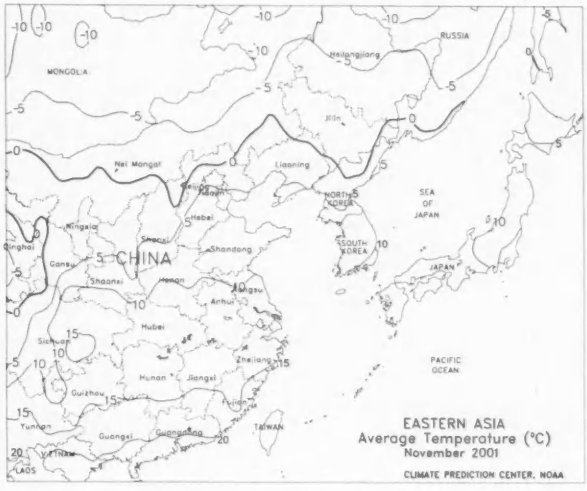


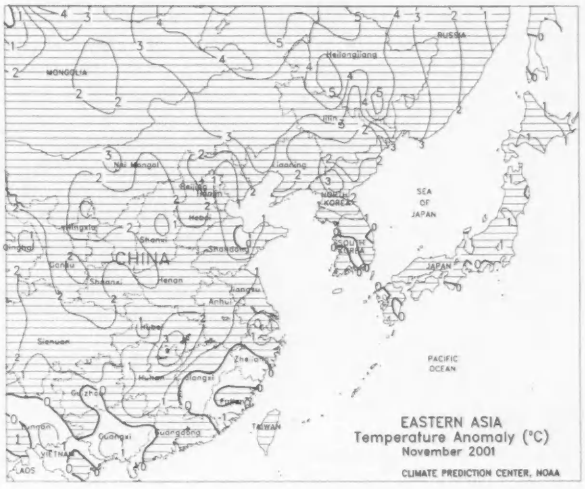
EASTERN ASIA

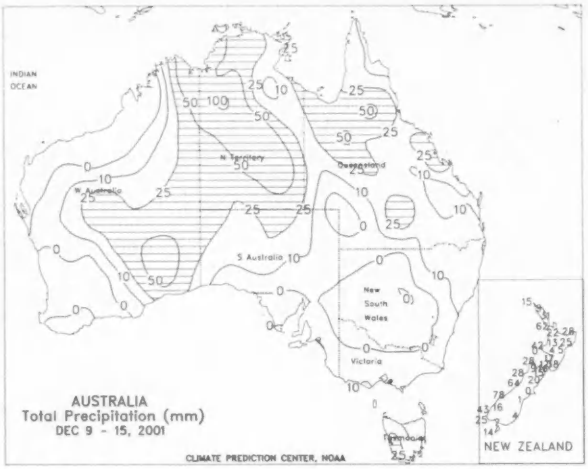
Seasonably cold weather caused winter wheat to enter dormancy across the North China Plain. Light precipitation (snow and rain) increased moisture supplies for spring growth. Much needed rain (15-60 mm) fell across the Yangtze Valley and southern China, easing short-term moisture deficits and favoring winter crops. The rain, however, slowed any remaining late rice harvesting. Temperatures averaged 1 to 3 degrees C below normal across the North China Plain and interior southern China and near normal elsewhere in China. During November, variable precipitation provided some moisture for winter wheat establishment across the North China Plain. Early December precipitation boosted moisture supplies across the regior. for winter wheat nearing dormancy. Across the Yangtze Valley and southern China, November rainfall was mostly below normal with pockets of above-normal rainfall in interior southern China.

EASTERN ASIA
Total Precipitation (mm)
November 2001
CLIMATE PREDICTION CENTER, NOAA


EASTERN ASIA
Percent of Normal Precipitation
November 2001
CLIMATE PREDICTION CENTER, NOAA

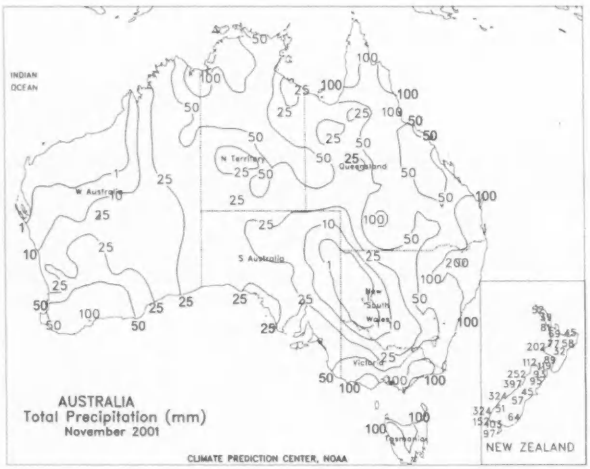

EASTERN ASIA
Average Temperature (°C)
November 2001
CLIMATE PREDICTION CENTER, NOAA

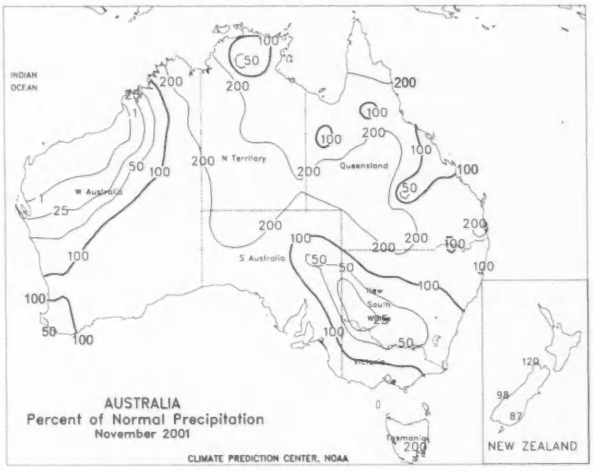

EASTERN ASIA
Temperature Anomaly (°C)
November 2001
CLIMATE PREDICTION CENTER, NOAA

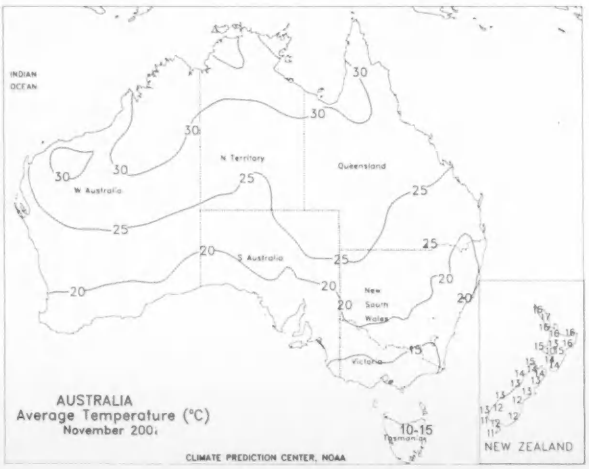


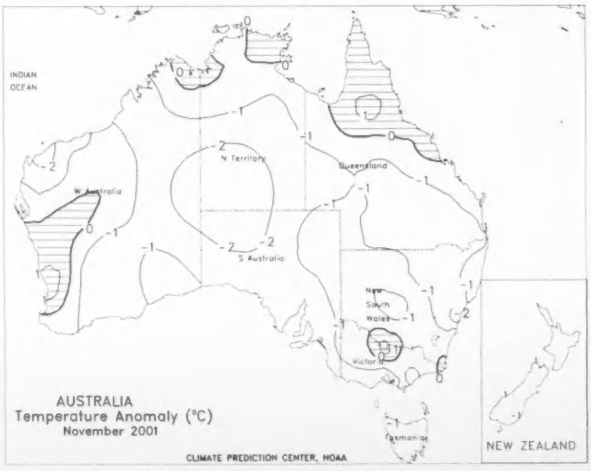
AUSTRALIA

Drier, albeit cooler weather covered Western Australia and the southeast (South Australia, Victoria, and southern New South Wales), bringing some relief to unharvested winter crops that have recently been subject to unfavorable wetness. Light to moderate showers (10-25 mm or more) covered primary summer crop areas of southern Queensland and northeastern New South Wales, increasing moisture for vegetative summer crops. However, drier weather developed in the western grazing areas of Queensland and New South Wales, with highs ranging from 35 to 40 degrees C. In New Zealand, dry weather covered eastern small grain and pasture areas of South Island but moderate showers (10-25 mm or more) continued elsewhere. In November, scattered, light to moderate showers fell on a weekly basis across Western Australia and the southeast, benefiting summer crops and pastures but hampering winter crop harvesting. Above-normal rainfall improved summer crop prospects in primary cotton, sorghum, and sugarcane areas of southern Queensland and northern New South Wales. Temperatures averaged near to below normal for the month in the major agricultural districts, slowing early summer crop development and affecting dry down of winter crops.



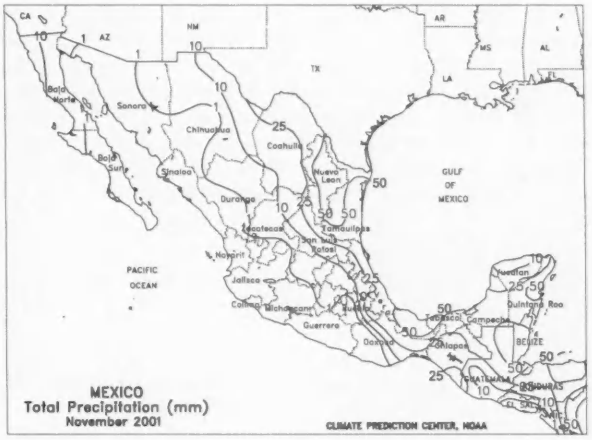


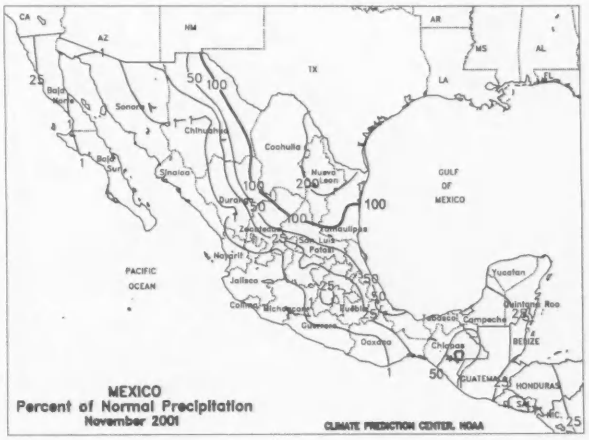


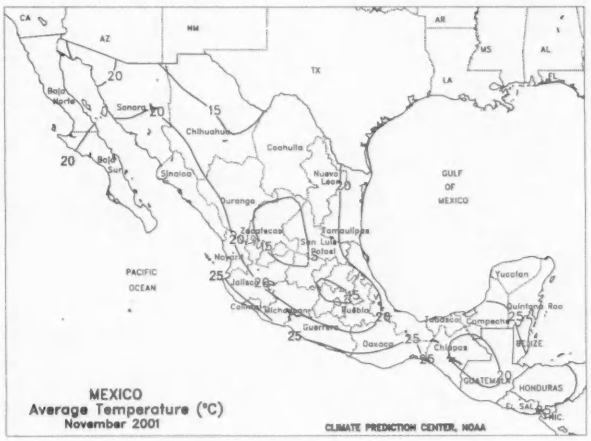


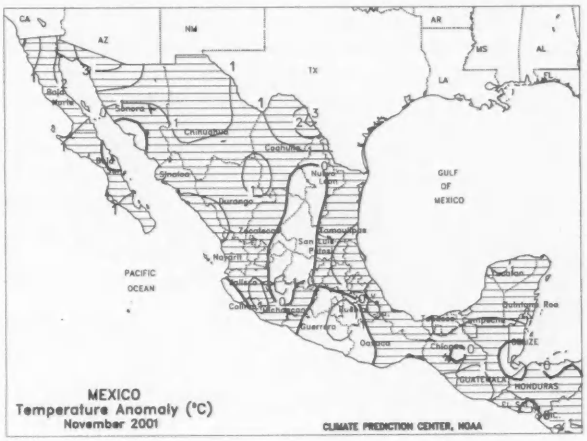
MEXICO AND CUBA

During November, seasonably drier weather prevailed across the main corn belt, favoring corn maturation and harvesting. In northeastern and north-central Mexico, above-normal November rainfall helped to boost reservoir levels and soil moisture for winter grain planting. In Cuba, Hurricane Michelle made landfall on November 4 with sustained winds of 115 knots (132 mph). The hurricane damaged sugarcane, citrus, and infrastructure in western Cuba. According to the United States National Hurricane Center, Michelle was the strongest hurricane to hit Cuba since 1952.



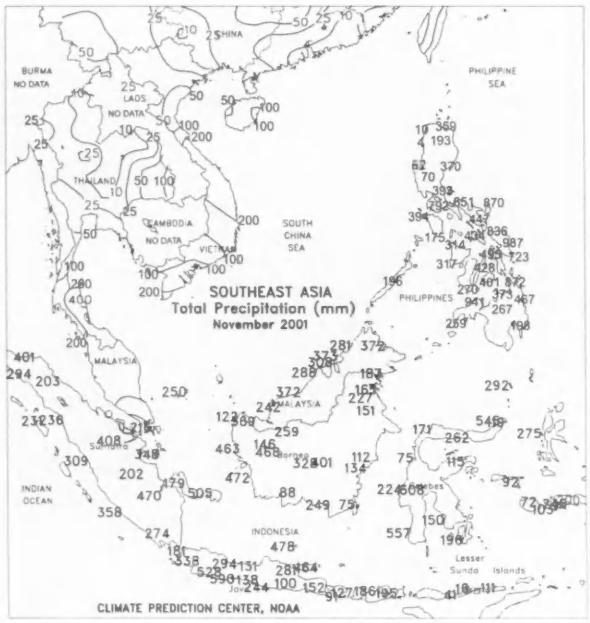


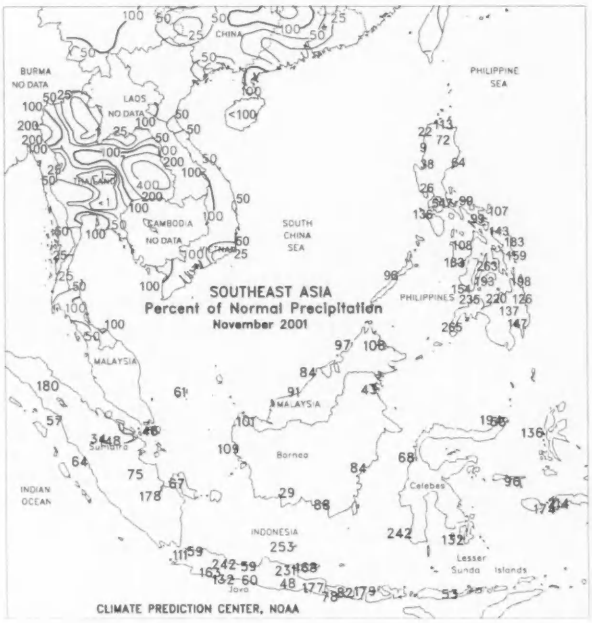


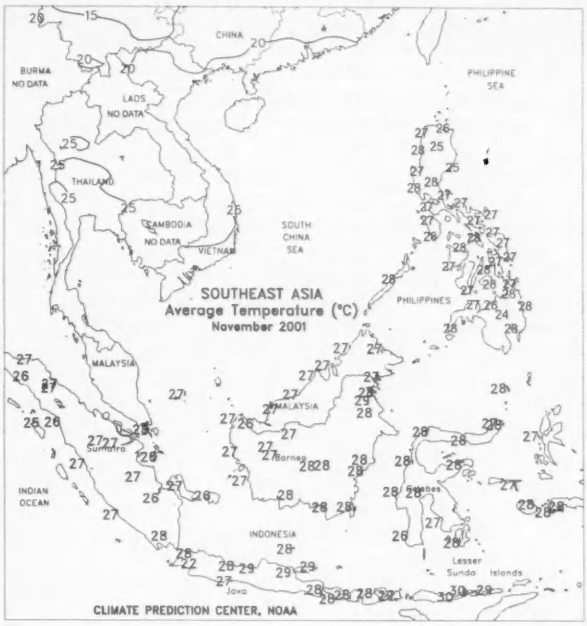


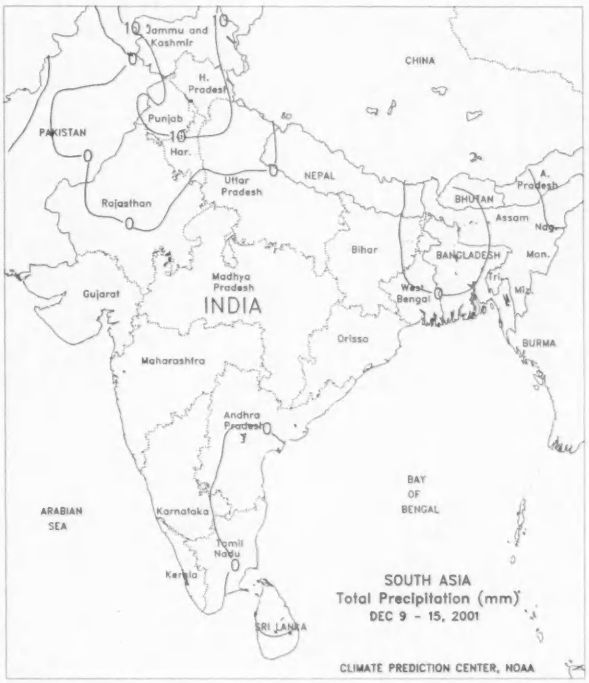
SOUTHEAST ASIA

The remnants of Tropical Storm Kajiki moved along the Vietnam coast, bringing heavy rains (25-200 mm, locally more). The heavy rainfall caused some flooding in central Vietnam and hampered winter-spring rice transplanting up to the Red River Delta in the north. Heavy showers (25-200 mm) fell throughout most of the Philippines, slowing fieldwork for rice and plantation crops, but increasing moisture supplies. Continued dryness in Java, Indonesia further reduced moisture supplies for vegetative main-season rice. Heavy showers (50-400 mm) increased moisture availability to oil palm throughout peninsular Malaysia and Sumatra, Indonesia. Seasonably dry weather continued to favor ongoing harvest activities for main-season rice. In November, Tropical Storm Lingling brought above-normal rainfall to most of the Philippines, slowing harvest activities, but increasing moisture supplies for second season crops. Lingling made landfall in south-central Vietnam, bringing heavy rains and high winds and possibly causing damage to mature rice. Near- to above-normal November rainfall in Java, Indonesia increased moisture supplies for main-season rice, while below-normal rainfall decreased moisture supplies for oil palm in peninsular Malaysia.



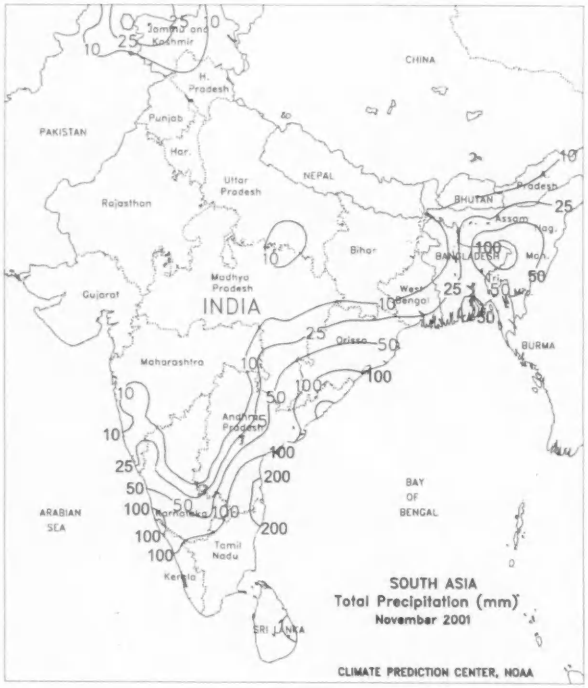


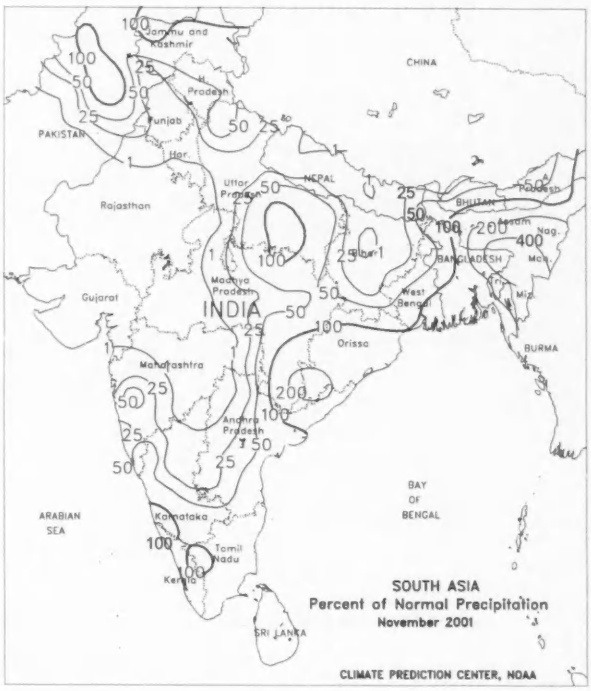


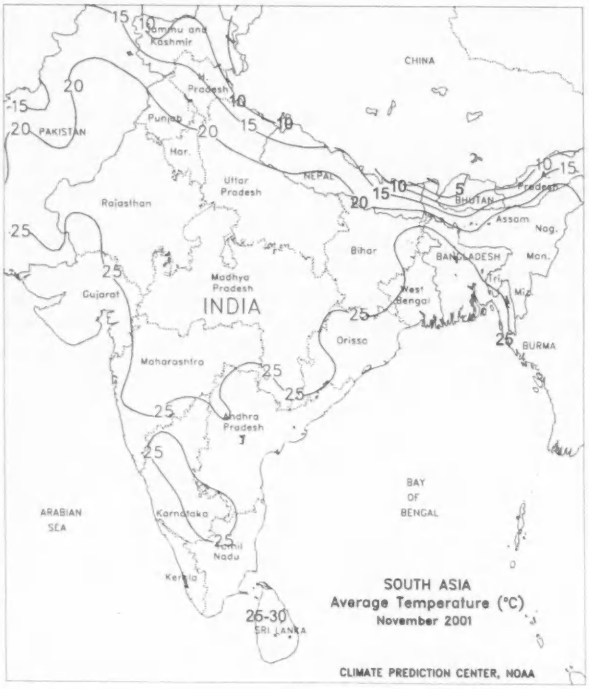


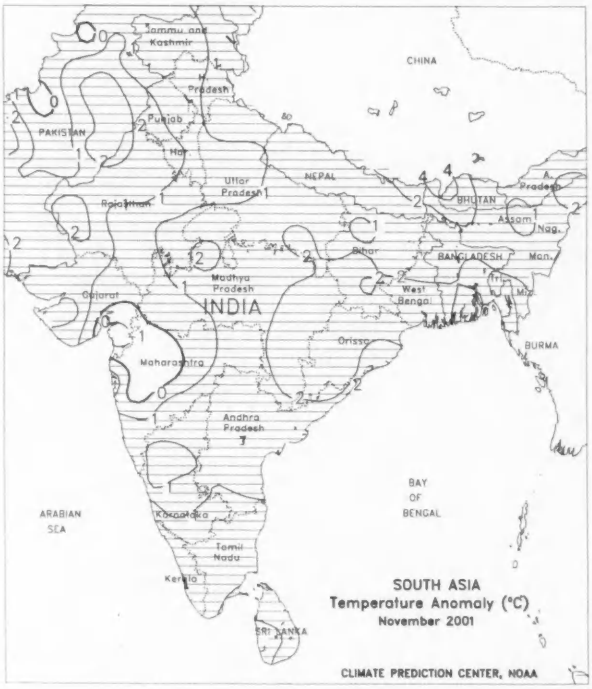
SOUTH ASIA

Warm, dry weather favored summer crop harvesting throughout much of the region. In north-central India (Punjab and adjacent areas), showers (10 mm or more) boosted moisture reserves for germination and establishment of winter grains and oilseeds. During November, lingering monsoon showers gradually receded from major rice areas of eastern India and Bangladesh. The drier weather allowed fieldwork, including main-season (kharif) rice harvesting, to intensify. By month's end, showers were confined to a seasonal position over southernmost India and Sri Lanka. Elsewhere, dry, warmer-than-normal weather favored harvesting of cotton and other summer crops. Winter wheat and oilseed planting likely made good early progress across Pakistan and northern India. (*This is the final weekly summary of the season. Coverage will resume in June 2002 with the onset of the summer rainy season.*)


Jammu and Kashmir
H. Pradesh
Punjab
Har.
Uttar Pradesh
Rajasthan
Bihar
Assam
Nag.
Man.
Miz.
West Bengal
Orissa
Madhya Pradesh
Gujarat
INDIA
Maharashtra
Andhra Pradesh
Karnataka
Tamil Nadu
Kerala
PAKISTAN
CHINA
NEPAL
BHUTAN
BANGLADESH
BURMA
SRI LANKA
ARABIAN SEA
BAY OF BENGAL
SOUTH ASIA
Total Precipitation (mm)
November 2001
CLIMATE PREDICTION CENTER, NOAA

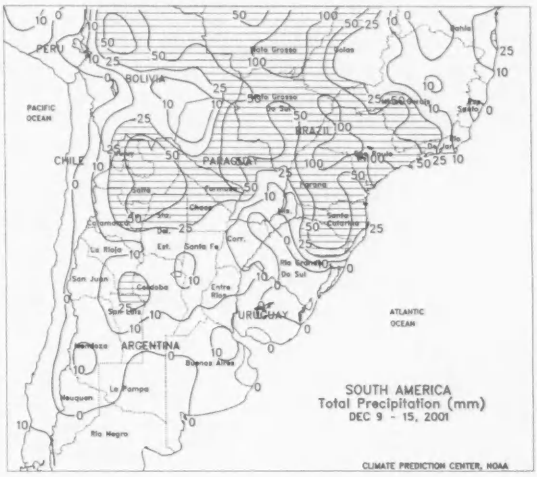

Jammu and Kashmir
H. Pradesh
Punjab
Har.
Uttar Pradesh
Rajasthan
Bihar
Assam
Nag.
Man.
Miz.
West Bengal
Orissa
Madhya Pradesh
Gujarat
INDIA
Maharashtra
Andhra Pradesh
Karnataka
Tamil Nadu
Kerala
PAKISTAN
CHINA
NEPAL
BHUTAN
BANGLADESH
BURMA
SRI LANKA
ARABIAN SEA
BAY OF BENGAL
SOUTH ASIA
Percent of Normal Precipitation
November 2001
CLIMATE PREDICTION CENTER, NOAA

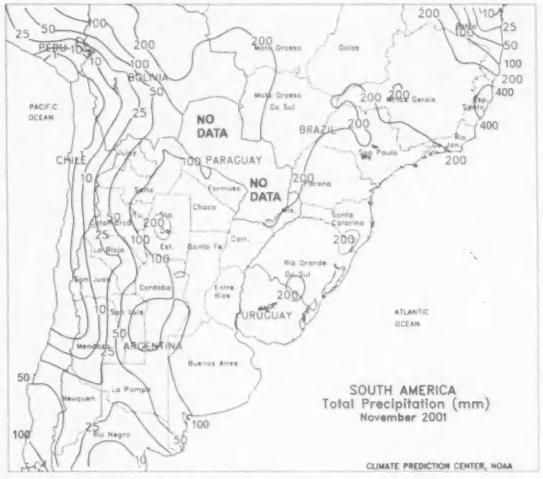

Jammu and Kashmir
H. Pradesh
Punjab
Har.
Uttar Pradesh
Rajasthan
Bihar
Assam
Nag.
Man.
Miz.
West Bengal
Orissa
Madhya Pradesh
Gujarat
INDIA
Maharashtra
Andhra Pradesh
Karnataka
Tamil Nadu
Kerala
PAKISTAN
CHINA
NEPAL
BHUTAN
BANGLADESH
BURMA
SRI LANKA
ARABIAN SEA
BAY OF BENGAL
26-30
SOUTH ASIA
Average Temperature (°C)
November 2001
CLIMATE PREDICTION CENTER, NOAA

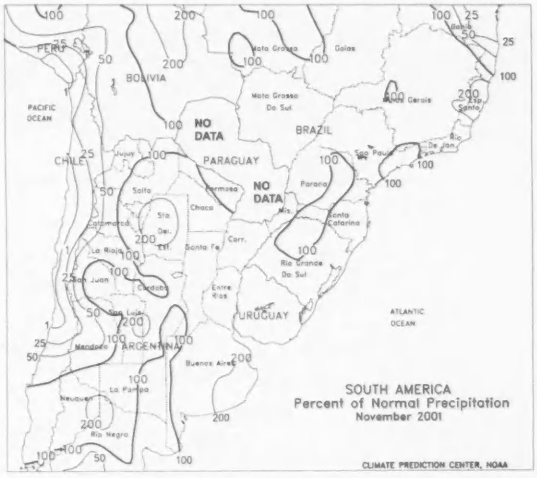

Jammu and Kashmir
H. Pradesh
Punjab
Har.
Uttar Pradesh
Rajasthan
Bihar
Assam
Nag.
Man.
Miz.
West Bengal
Orissa
Madhya Pradesh
Gujarat
INDIA
Maharashtra
Andhra Pradesh
Karnataka
Tamil Nadu
Kerala
PAKISTAN
CHINA
NEPAL
BHUTAN
BANGLADESH
BURMA
SRI LANKA
ARABIAN SEA
BAY OF BENGAL
SOUTH ASIA
Temperature Anomaly (°C)
November 2001
CLIMATE PREDICTION CENTER, NOAA

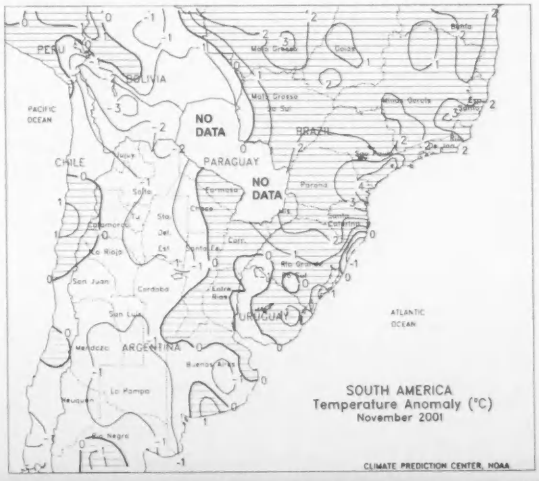
SOUTH AMERICA

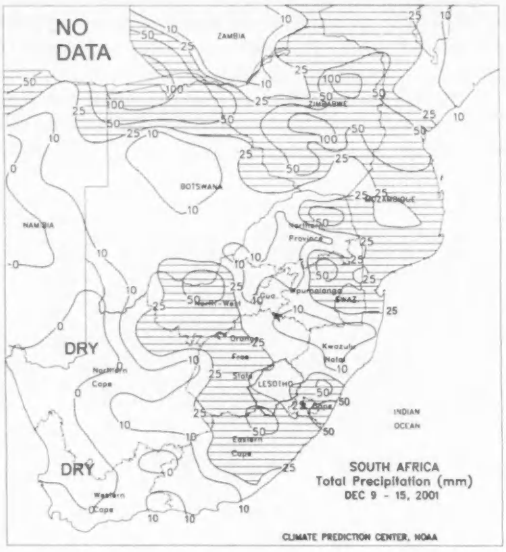
In western Argentina (La Pampa and central and southern Cordoba), continued dry, warm weather (scattered amounts less than 15 mm) reduced topsoil moisture and increased stress on vegetative corn, soybeans, sorghum, and sunflowerseed. This region accounts for 25 to 35 percent of the total area for those crops. Dry weather prevailed elsewhere in central Argentina, favoring wheat maturation and harvesting, but topsoil moisture for summer crops was also declining. Winter wheat was still immature in southern Buenos Aires. In northern Argentina, light to moderate rain (10-50 mm) continued to provided adequate moisture supplies for newly planted cotton. Across Argentina, temperatures averaged 1 to 2 degrees C above normal, increasing crop water use. According to the Argentine Agricultural Secretariat as of December 14, nationwide corn, sorghum, sunflowers, and soybeans were 83, 80, 89, and 70 percent planted, respectively, compared with 85, 80, 93, and 75 percent last year. Cotton planting was 63 percent complete. Winter wheat harvesting was 41 percent done compared with 31 percent done last year. Across southern Brazil, widespread showers (15-100 mm or more) continued to maintain adequate to abundant soil moisture for soybeans, corn, sugarcane, coffee, and oranges. Mostly dry weather covered Espirito Santo, northeastern Minas Gerais, and western Bahia, reducing soil moisture for soybeans, corn, and coffee. According to Safras, a Brazilian grain analyst firm, as of December 14, soybeans were 98 percent planted, compared with the 5-year average of 95 percent. Across central Argentina, November rainfall was above normal but much less than October, generally favored germinating summer crops and filling to maturing winter wheat. However, below-normal rainfall in southern Cordoba slowed corn planting and reduced soil moisture supplies. By late November, winter wheat harvesting was underway. Across southern Brazil, near- to above-normal November rainfall maintained adequate to abundant soil moisture for germinating soybeans.





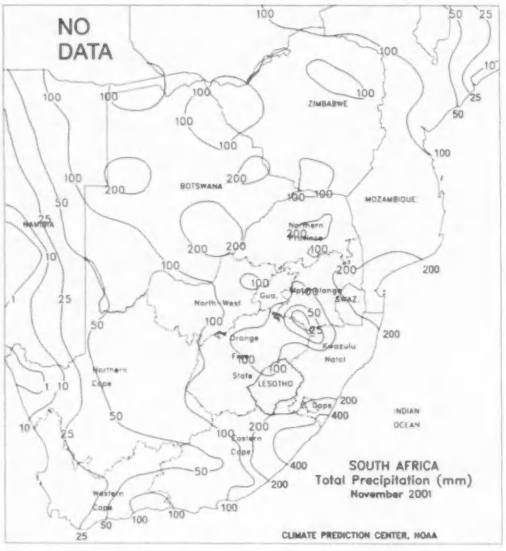


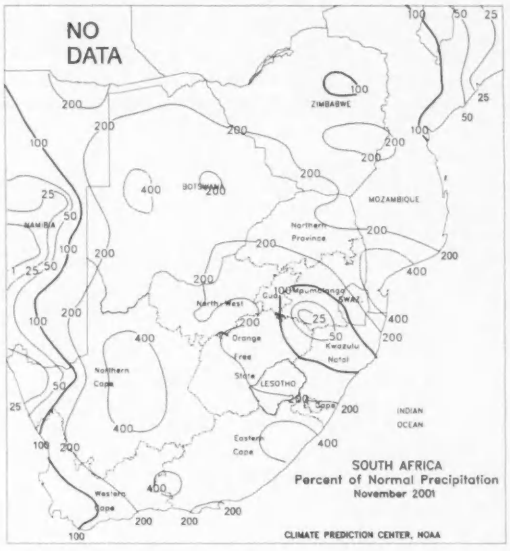


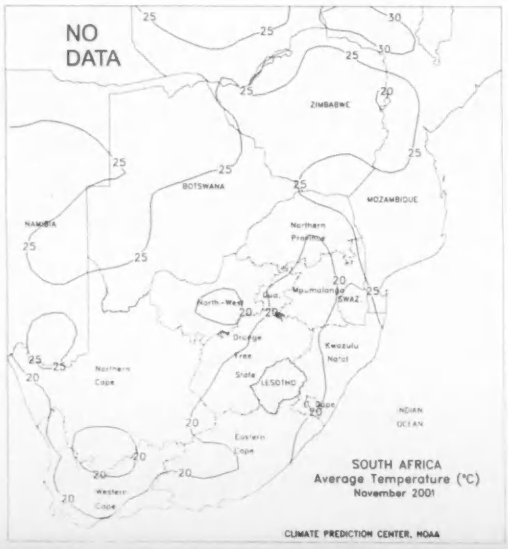


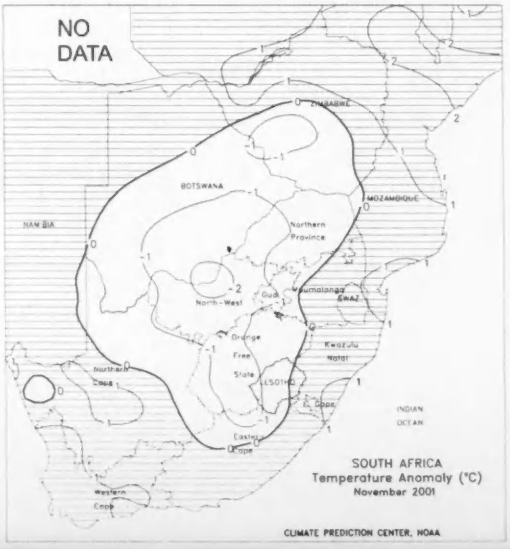
SOUTH AFRICA

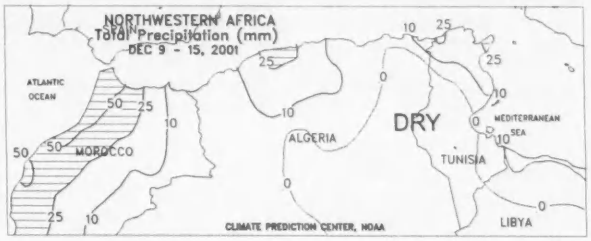
Widespread, locally heavy rain (10-25 mm, locally exceeding 50 mm) continued in the western corn belt. Excessive topsoil moisture was likely causing further fieldwork delays in important white corn areas of North West and Free State. Lighter showers (5-25 mm) favored development of vegetative summer crops farther east (eastern Free State and southern Mpumalanga). Across the corn belt, highs generally ranged in the upper 20s degrees C, which was below average for western growing areas and near to slightly above in the east. Elsewhere, heavy rain (25-50 mm, locally reaching 100 mm) returned to Eastern Cape and neighboring sections of KwaZulu-Natal, keeping sugarcane and other summer crops abundantly watered. Lighter showers (5-25 mm) fell in the more northerly sugarcane areas. Warm, dry weather maintained seasonably high irrigation demands in orchards and vineyards of Western Cape. Throughout November, an active weather pattern generated frequent, occasionally heavy showers over the corn belt and in crop areas of Eastern Cape and KwaZulu-Natal. The rainfall, which provided abundant to excessive moisture levels for summer crop germination and establishment, eventually resulted in localized flooding and planting delays. In Western Cape, an overall drier pattern necessitated irrigation of fruits and vegetables. Monthly temperatures were near to below normal in the corn belt and slightly above normal elsewhere.





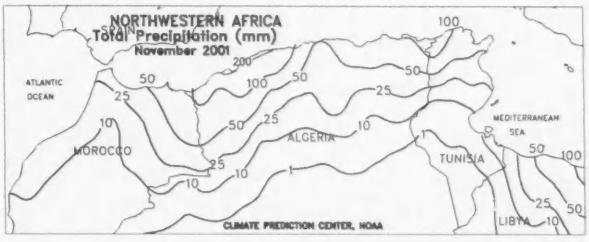


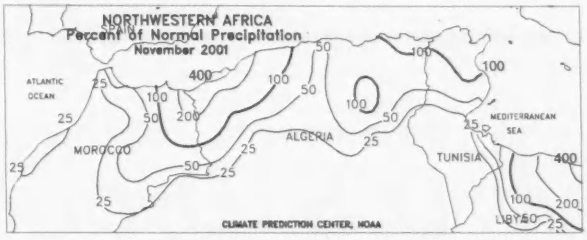


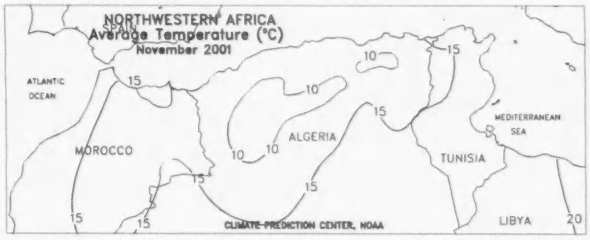


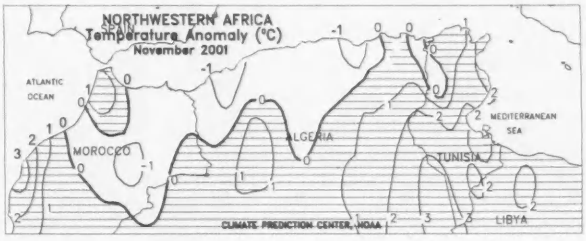
NORTHWESTERN AFRICA

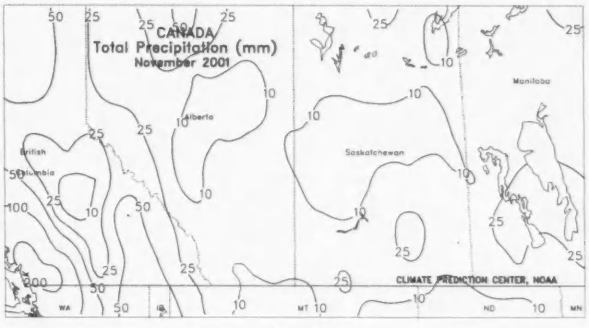
In Morocco, the first significant precipitation since the beginning of the growing season fell over winter grain areas. Rainfall amounts ranging from 10 to 50 mm will likely prompt widespread planting, delayed by previous dryness. However, additional rain is needed to ensure uniform crop emergence and sufficient establishment. Showers (25-35 mm) in central Algeria helped ease developing dryness, while in western Algeria, winter grain planting was likely progressing slowly due to the unfavorable dryness since the end of November. In eastern Algeria and Tunisia light showers (2-25 mm) dampened topsoils for planting, however soaking rain was needed to boost topsoil moisture for germination and early establishment. In November, dry weather in Morocco slowed winter grain planting, while near- to above-normal rainfall in Algeria and Tunisia favored planting and early emergence of winter grains. Planting typically continues through December.

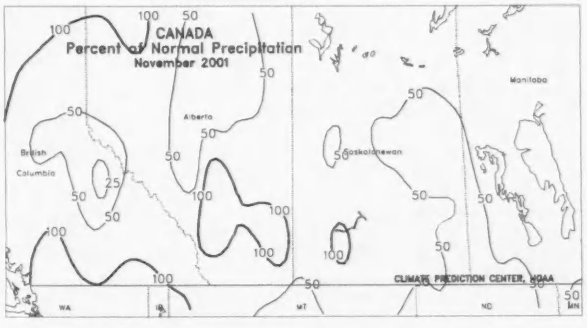


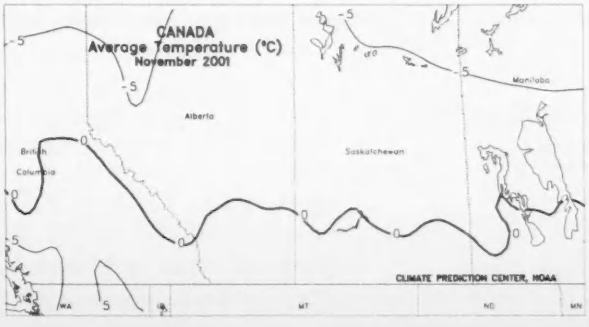


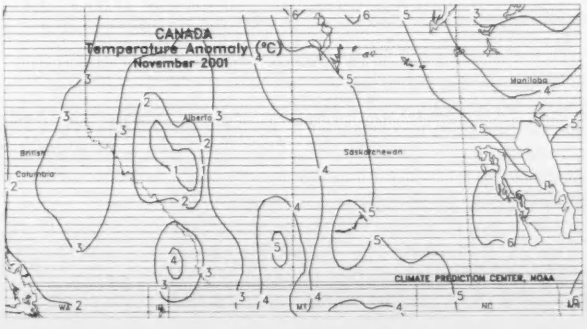












The *Weekly Weather and Crop Bulletin* (ISSN 0043-1974) is published weekly and jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the *Weekly Weather Chronicle*. It is issued under general authority of the Act of January 12, 1895 (44-USC 213), 53rd Congress, 3rd Session. NOAA is responsible for managing, printing, and distributing the bulletin. The contents may be reprinted freely, with proper credit.

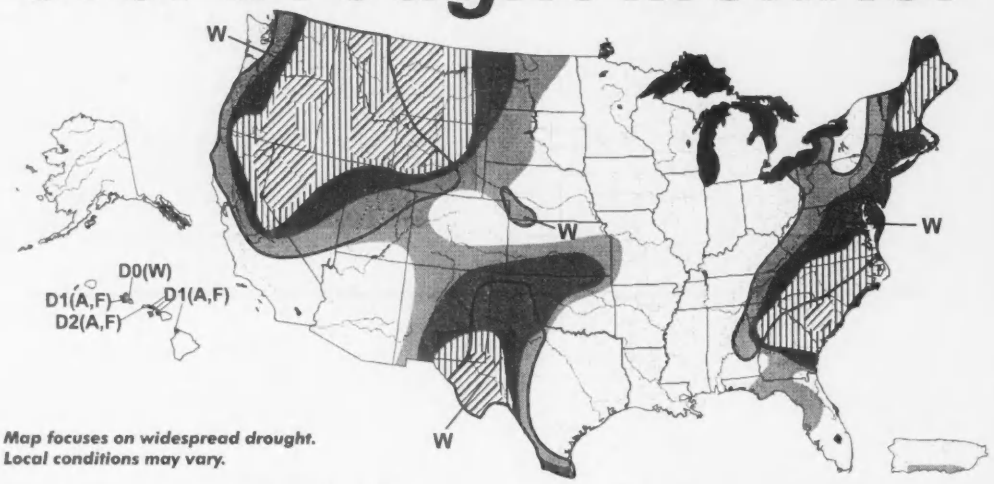
Annual subscriptions: domestic first class **$45**, foreign **$55** (in U.S. funds by international money order or check drawn on U.S. bank) payable to **U.S. Department of Commerce, NOAA**. POSTMASTER: Send address changes to: **Climate Prediction Center, W/NP52, Attn: *Weekly Weather and Crop Bulletin*, Room 605, WWBG, 5200 Auth Road, Camp Springs, MD 20746-4304**. Order subscriptions from the office and address listed above. First-class postage paid at Washington, DC, and other mailing offices. Correspondence to the meteorologists should be directed to: **Weekly Weather and Crop Bulletin, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 5844, Washington, DC 20250.** Internet URL: **http://www.usda.gov/oce/waob/jawf**; E-mail address: ***bmorris@oce.usda.gov***

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Climate Prediction Center
Managing Editor . . . . . ***David Miskus*** *(202) 720-7919*
Meteorologists . . . . . ***Eric Luebehusen, Brad Pugh,*** . . . . . and ***Chester Schmitt***
Subscriptions . . . . ***John Kopman*** (301) 763-8000 ext 7534
. . . . . **fax:** (301) 763-8125

U.S. DEPARTMENT OF AGRICULTURE
Economic Research Service
E.R.S. Editor . . . . . ***Sharon Lee***
National Agricultural Statistics Service
Agricultural Statistician . . . . . ***Mark Miller*** (202) 720-7621
State Summaries Editor . ***Delores Thomas*** (202) 720-8033
World Agricultural Outlook Board
International Editor . . . . . ***Tom Puterbaugh***
U.S. Editor . . . . . ***Brad Rippey*** (202) 720-2397
Agricultural Weather Analysts . . . . . ***Mark Brusberg*** . . . . . ***Bob Stefanski, Brian Morris,*** and ***Harlan Shannon***
Stoneville . . . . . ***Lee Crowley*** and ***Josh Stewart***

December 11, 2001 Valid 8 a.m. EST

U.S. Drought Monitor



Map focuses on widespread drought. Local conditions may vary.

D0 Abnormally Dry
D1 Drought-First Stage
D2 Drought–Severe
D3 Drought–Extreme
D4 Drought–Exceptional
Delineates Overlapping Areas

Drought Impact Types:
A = Agriculture
W = Water (Hydrological)
F = Fire danger (Wildfires)
(No type = All 3 impacts)

USDA National Drought Mitigation Center

See accompanying text summary for forecast statements
http://drought.unl.edu/monitor/monitor.html

• Released Thursday, December 13, 2001 •
Author: David Miskus, JAWF/CPC/NOAA

Climate Prediction Center, W/NP52
Attn: *Weekly Weather & Crop Bulletin*
NOAA/NWS/NCEP/CPC
5200 Auth Road
WWB, Room 605
Camp Springs, MD 20746-4304

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

WEEKLY NEWS BULLETIN
FIRST CLASS

WWCB 1

UMI
Periodicals check In
P.O.Box 1346
Ann Arbor MI 48106-1346

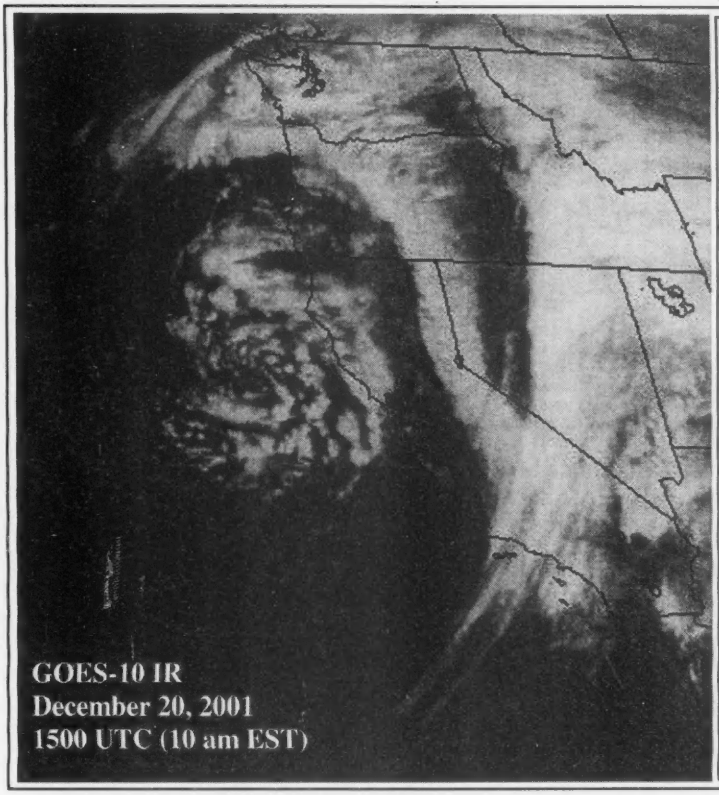
FIRST CLASS MAIL
POSTAGE & FEES PAID
NOAA
PERMIT NO. G-19

Volume 88, No. 52 http://www.usda.gov/oce/waob/jawf/wwcb.html December 27, 2001

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
and World Agricultural Outlook Board



GOES-10 IR
December 20, 2001
1500 UTC (10 am EST)

Around mid-week, yet another in a continuing series of Pacific storm systems brought additional precipitation to the West, with light to moderate rains falling on coastal locations, and heavy snows blanketing the Sierra Nevada and Cascades, and eventually parts of the Rockies. This marked the sixth consecutive week of ample precipitation in the Pacific Northwest (from California's Sierra Nevada northward into Washington), and the eleventh straight week (since early October) that coastal Washington and Oregon has experienced stormy weather. The precipitation has significantly eased or alleviated long-term drought conditions along coastal areas west of the Cascades and Sierra Nevada, and raised mountain basin precipitation, snowpack, and snow water content to much-above normal levels as of late December. However, over half of the wet season (November-March) still remains in much of the West, and reservoir supplies–which are typically recharged during the spring snow melt season–remained below normal in many Western States.

HIGHLIGHTS

December 16 - 22, 2001

Highlights provided by USDA/WAOB and CPC/NOAA

Colder air gradually overspread the **eastern half of the Nation**, ending a 7-week run of remarkable warmth. Late-week snowfall accompanied the cold weather across the **upper Midwest** and portions of the **Great Lakes region**, increasing stress on livestock and disrupting transportation. Occasional precipitation (rain and snow) also fell in the **Northeast**, helping to ease long-term precipitation deficits. Farther south, more heavy rain fell early in the week and again at week's end in areas from **eastern Texas to the lower Ohio Valley**. As a result, lowland flooding persisted and some winter wheat fields remained submerged. One-month rainfall totals (since

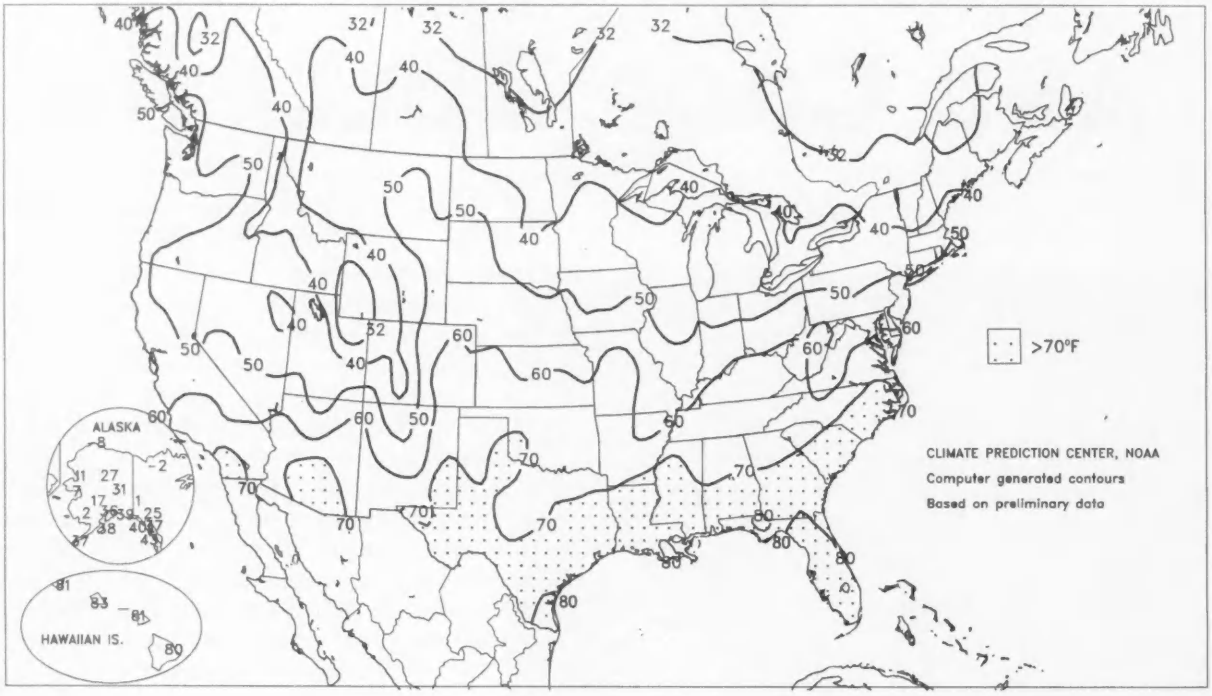
(Continued on page 5)

Contents

Extreme Maximum & Minimum Temperature Maps 2
Weather Data for the Delta and Bootheel & **Delta Nov. 20 - Dec. 18 Total Precipitation** 3
Temperature Departure Map, **Extreme Minimum Wind Chill Map, & New Wind Chill Tables and Explanation** 4
Total Precipitation Map 5
National Weather Data for Selected Cities 6
National Agricultural Summary & Snow Cover Map 9
International Weather and Crop Summary 10
2001 Bulletin Index 14
Subscription Information & December 18 Drought Monitor 16

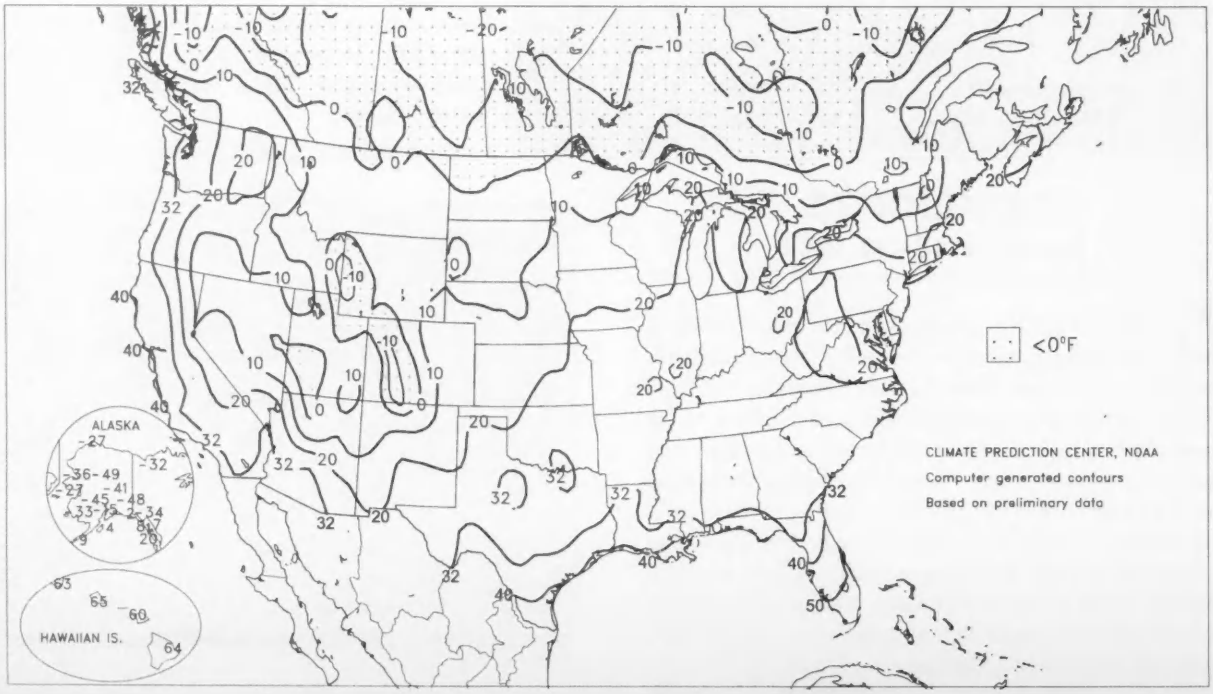
Extreme Maximum Temperature (°F)

DEC 16 - 22, 2001



Extreme Minimum Temperature (°F)

DEC 16 - 22, 2001



Weather Data for Selected Locations in the Delta and the Bootheel

Weather Data for the Week Ending December 22, 2001

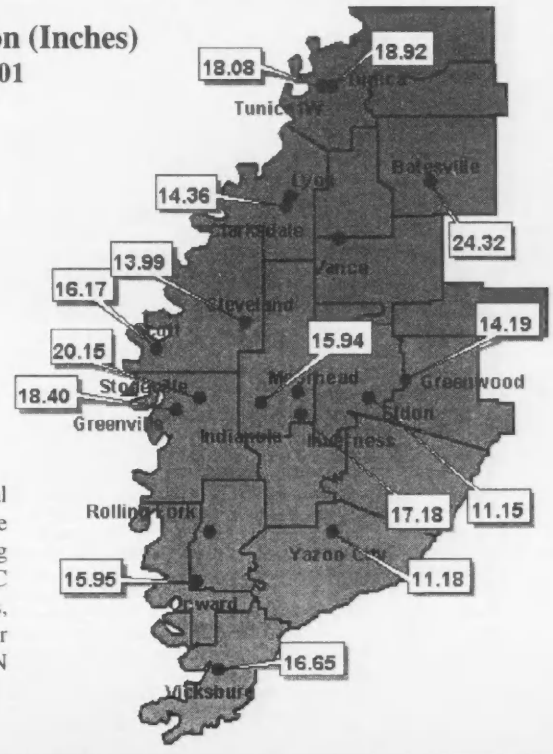
Data provided by the Mississippi State Delta Research and Extension Center (DREC), the Southern Regional Climate Center (SRCC), and the University of Missouri.

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							4-INCH SOIL TEMP, °F		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
MS	BATESVILLE [X]	60	39	71	26	50	8	1.55	0.17	1.55	8.12	198	64.01	122	--	--	0	2	1	1
	CLARKSDALE [X]	59	38	69	31	49	6	1.87	0.61	1.87	9.59	229	64.73	133	--	--	0	2	1	1
	CLEVELAND [X]	60	40	71	32	50	7	1.36	0.24	1.27	6.34	183	64.22	137	--	--	0	3	2	1
	GREENVILLE [X]	62	40	73	33	51	4	1.40	0.26	1.40	8.21	223	65.96	134	--	--	0	0	1	1
	GREENWOOD [X]	63	40	76	29	52	6	1.57	0.35	0.90	7.46	202	63.67	130	--	--	0	2	2	2
	INDIANOLA 1S	62	42	75	34	52	--	1.57	--	0.92	6.77	--	66.21	--	57	50	0	0	3	2
	INVERNESS 5E	63	45	76	36	54	--	1.47	--	0.77	7.87	--	60.71	--	58	50	0	0	2	2
	LYON	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MOORHEAD [X]	63	44	76	36	54	8	1.10	-0.23	1.10	6.25	150	58.21	115	--	--	0	0	1	1
	ONWARD	66	44	78	33	55	--	2.06	--	1.38	6.92	--	56.20	--	57	53	0	0	3	2
	ROLLING FORK [X]	65	43	78	33	54	9	0.81	-0.38	0.77	5.04	131	48.99	99	--	--	0	0	2	1
	SCOTT	62	43	72	34	53	--	1.81	--	1.15	7.73	--	--	--	56	48	0	0	3	1
	SIDON	66	45	76	37	56	--	1.62	--	1.12	7.47	--	53.32	--	60	49	0	0	2	2
	TUNICA [X]	58	39	70	31	49	7	2.20	0.91	1.50	8.37	207	57.93	117	--	--	0	2	2	2
	TUNICA 1W	59	37	68	30	48	--	4.64	--	1.92	10.33	--	58.81	--	53	45	0	2	3	3
	VANCE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	VICKSBURG [X]	64	42	79	31	53	4	0.71	-0.55	0.67	5.43	137	72.46	138	--	--	0	2	2	1
	YAZOO CITY [X]	61	40	73	29	51	3	0.86	-0.54	0.86	6.20	141	62.11	117	--	--	0	3	1	1
	STONEVILLE *	61	41	75	33	51	6	1.47	0.26	1.44	8.41	206	70.04	138	61	50	0	0	2	1
MO	CARDWELL	54	37	57	29	46	9	5.10	4.02	3.36	8.91	256	45.13	88	51	48	0	2	3	2
	CHARLESTON	52	36	57	28	44	11	4.86	4.04	2.39	7.99	243	43.36	90	49	41	0	3	4	2
	CLARKTON	53	35	56	26	44	7	5.49	4.43	3.42	9.84	325	48.56	108	--	--	0	3	3	3
	DELTA	51	33	53	25	42	7	4.06	3.10	2.88	6.66	201	38.45	76	46	40	0	4	3	2
	GLENNONVILLE	53	36	56	27	45	8	5.24	4.18	3.80	8.57	283	43.00	96	49	43	0	3	3	2
	PORTAGEVILLE #1	54	38	58	29	46	10	5.02	3.96	2.67	8.79	246	48.00	96	50	42	0	2	3	2
	PORTAGEVILLE #2	54	38	58	27	46	10	4.63	3.57	2.33	8.40	235	43.67	87	51	42	0	2	3	2
	STEELE	54	38	60	30	46	9	4.83	3.69	2.59	8.13	209	50.26	97	50	43	0	1	3	2

Compiled by USDA/OCE/WAOB's Stoneville Field Office.
* Based on 1964-93 normals.
[X] Based on 1961-90 normals.

Delta and Bootheel Weather and Crop Summary: Heavy rainfall in the beginning of the week continued flooding problems throughout the region. Temperatures continue to be much above normal across the entire Lower Mississippi River Valley. Where fields were not flooded, winter wheat flourished under the warm and wet conditions. The wet conditions continue to hamper field work.

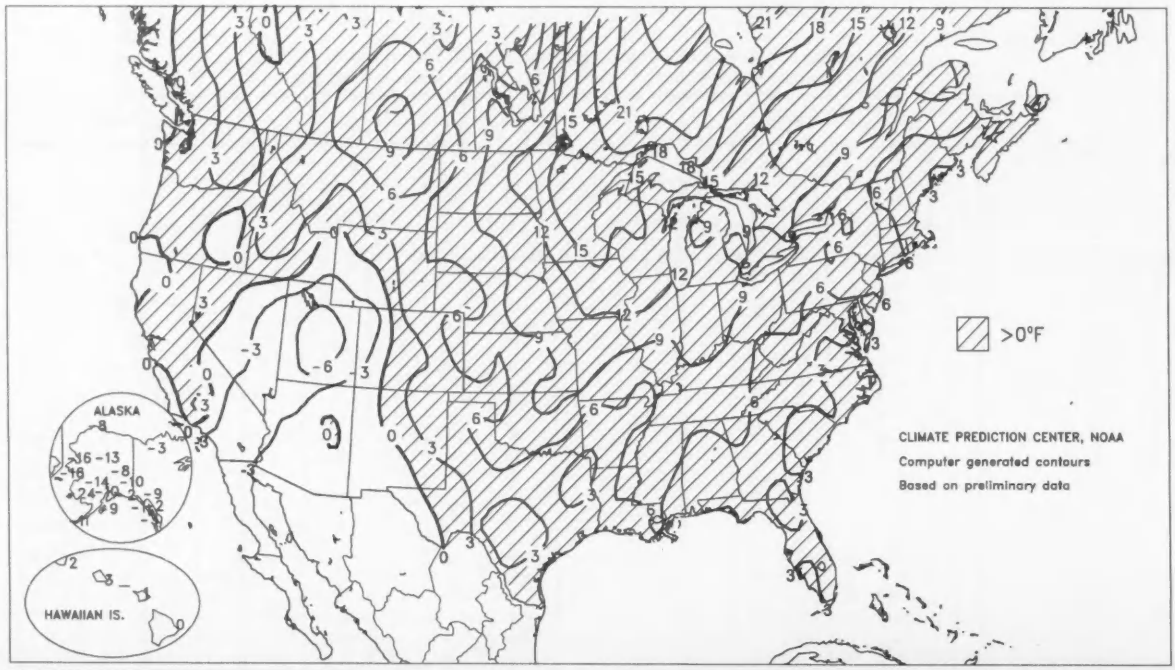
Total Precipitation (Inches)
Nov. 20 - Dec. 18, 2001



Locations include National Weather Service cooperative observing stations, MSU/DREC automated weather stations, and USDA/National Water and Climate Center SCAN sites.

Departure of Average Temperature from Normal (°F)

DEC 16 - 22, 2001



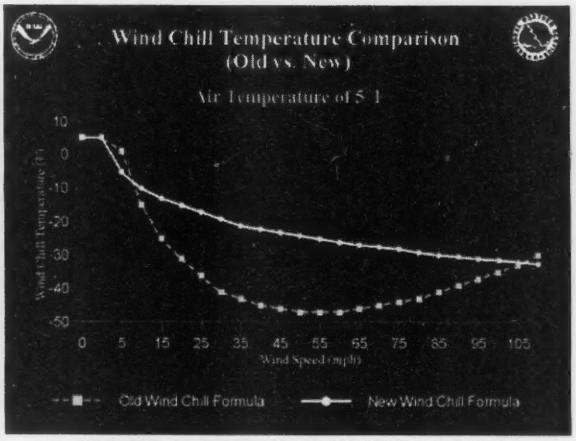
Wind Chill Chart

Wind (mph)	Temperature (°F)																	
Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes, 10 minutes, 5 minutes

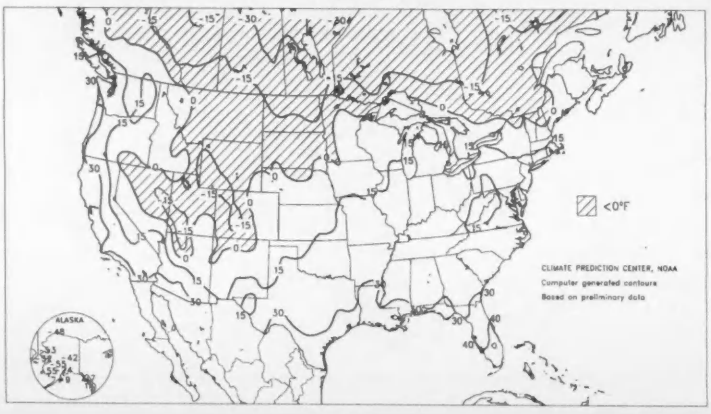
$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T = Air Temperature (°F) V = Wind Speed (mph) Effective 11/01/01



Extreme Wind Chill Temperature (°F)

DEC 15 - 22, 2001



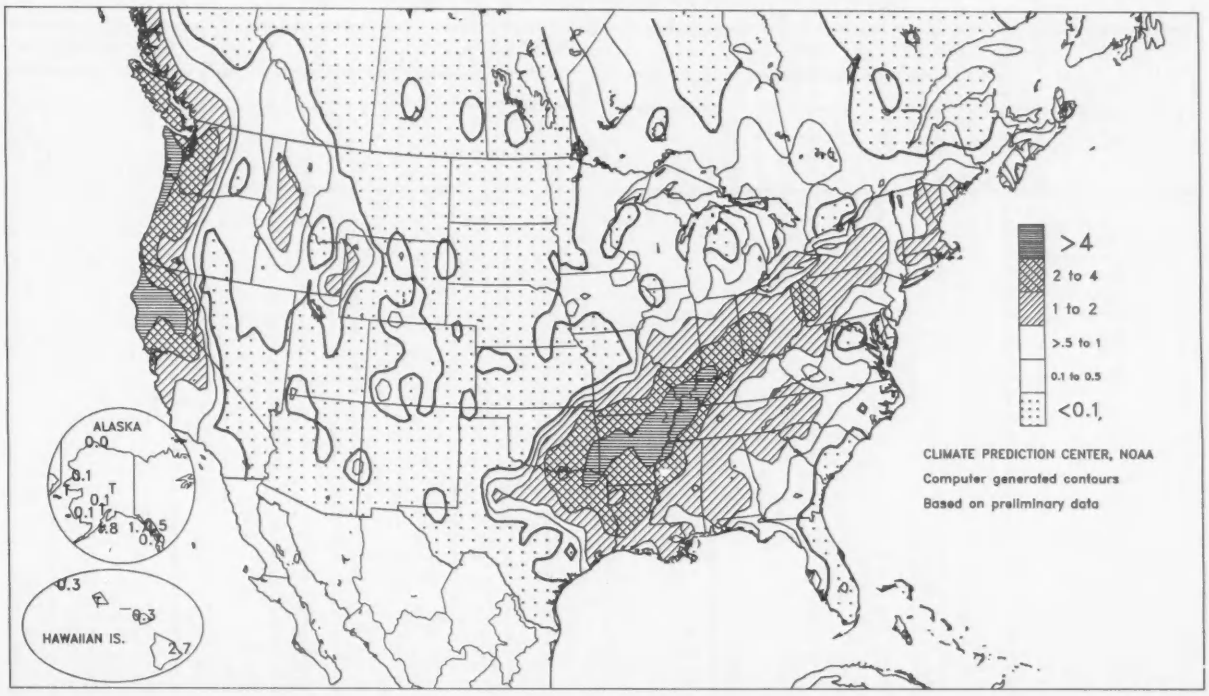
National Weather Service Implements a New Wind Chill Temperature Index

On November 1, the NWS implemented a replacement Wind Chill Temperature (WCT) index for the 2001-2002 winter season. The change improves upon the current WCT Index used by the NWS and the Meteorological Services of Canada (MSC, the Canadian equivalent of the NWS), currently based on the 1945 Siple and Passel Index. The new formula uses advances in science, technology, and computer modeling to provide a more accurate, understandable, and useful formula for calculating the dangers from winter winds and freezing temperatures. Clinical trials have verified the accuracy and improved the new formula.
For more detailed information:

http://205.156.54.206/om/windchill/

Total Precipitation (Inches)

DEC 16 - 22, 2001



(Continued from front cover)

November 24) exceeded 20 inches in parts of the **Delta** *(see page 3)*. In contrast, only light showers dampened the **southern Atlantic Coastal Plain**, where pastures and winter wheat continued to suffer from the effects of an extremely dry autumn. Precipitation also largely bypassed winter wheat areas on the **Plains**, leaving little protective snow cover as cold air began to arrive. In addition, soils remained unfavorably dry in several wheat areas, particularly across **Montana** and portions of **Kansas** and **Oklahoma**. In the **West**, the continuation of a 6-week wet spell further eased long-term moisture deficits from **northern California and the Great Basin northward**. However, reservoir supplies—which are typically recharged during the spring snow-melt season—remained below normal. After midweek, precipitation briefly spread into areas as far south as **southern California** and the **Southwest**.

Early in the week, heavy rain continued in the **lower Mississippi Valley** and surrounding areas before spreading into the **East**. On Sunday, daily-record rainfall totals included 3.68 inches in **Little Rock, AR** (securing their third consecutive month with above-normal precipitation for the first time since August-October 1997), and 2.29 inches in **Paducah, KY**. **Paducah** also set a rainfall record for December 17 (2.70 inches), boosting their month-to-date total to 8.07 inches. In **western Tennessee**, **Memphis** received 20.03 inches from November 24 - December 17, then netted another 1.29 inches on December 22-23.

Meanwhile, another round of heavy precipitation arrived in the **Northwest** on Sunday, followed by another storm system that moved ashore in **California** on December 20. Daily-record rainfall totals in **western Washington** for December 16 included 3.44 inches in **Shelton** and 2.90 inches in **Olympia**. Monthly rainfall in **Olympia** exceeded 10 inches for the second consecutive month, boosting their water year-to-date (October 1 - December 20) total to 29.14 inches (165 percent of normal). During the 2000-01 water year, **Olympia** did not reach the 29-inch mark until August 21, 2001, and netted only 31.28 inches (62 percent of normal) during the entire 12-month period. Farther south, the California Department of Water Resources reported that the water equivalent of the **Sierra Nevada** snow pack climbed to 13 inches (nearly 140 percent of normal) by December 20, up from approximately 5 inches at the end of November. Cool weather lingered in **California**, where a light freeze (generally 28 to 32°F) struck the **San Joaquin Valley** on Sunday, and daily-record lows included 25°F (on December 17) in **Thermal** and 18°F (on December 19) in **Lancaster**.

Farther east, some record warmth prevailed early in the week, followed by more seasonable temperatures. **International Falls, MN**, opened the week with consecutive daily-record highs (39 and 37°F), while **Tampa, FL**, continued to experience highs at or above 80°F through December 17. **Tampa's** total of 17 consecutive 80-degree days in December broke their record of 12, set in 1971 and 1972. Warm weather was also observed on the **central and southern Plains** until week's end, resulting in a daily-record high (68°F) on December 18 in **Wichita, KS**. Meanwhile, temperatures remained mostly above normal across the **upper Midwestern and Great Lakes States**, despite mid- to late-week snow showers and gusty winds. Streaks of above-normal average temperatures reached 54 days (October 28 - December 20) in **Minneapolis, MN**, and 51 days (October 31 - December 20) in **Marquette, MI**. Nevertheless, the season's first measurable snowfall occurred on December 19 in locations such as **Milwaukee, WI** (0.6 inch), and **Moline, IL** (0.2 inch). Some other locations, however, continued to await their latest first measurable snowfall on record, including **LaCrosse, WI** (previously December 7, 1969), **Madison, WI** (previously December 15, 1999), and **Ft. Wayne, IN** (previously December 17, 1998).

A pair of storm systems produced widespread snowfall in parts of the **Northeast**, where month-to-date (December 1-20) totals reached 13.0 inches in **Bangor, ME**, and 9.9 inches in **Burlington, VT**. In addition, unusually high water temperatures contributed to some impressive snow squall totals downwind of the **Great Lakes**. On December 17, **Lake Erie's** near-surface temperature of 45°F was 6°F above normal and tied the record high for the date set in 1991 and 1998. In **New York's Lewis County** on December 20-21, **Montague** received 24 inches of snow in 30 hours.

Later in the week, high pressure behind the departing **Northeast** storm finally dropped readings to freezing at **Washington/National Airport (DCA)** on December 22. This was **Washington's** latest first freeze on record, breaking the former date by 8 days set in 1980 (records date back to 1871), and the first time there was no Autumn freeze. This was not the norm in the surrounding suburbs, however, as nearby **Washington/Dulles (IAD)** and **Baltimore-Washington (BWI)** airports had already experienced numerous days at or below 32°F. Meanwhile, the **California** storm system moved eastward into the **Great Basin** and weakened, but by Saturday, had reformed over the **central High Plains**, producing light precipitation in the **central Plains, western Corn Belt, and upper Midwest**. However, temperatures, not precipitation, would become the main impact of this storm as Arctic air began to plunge southward and eastward into the **central and eastern United States** behind the system's cold front. As the week ended, a new upper-air pattern became established, with a deep trough (low pressure) over the **East** and a strong ridge (high pressure) over the **West**. The ridge in the **West** finally brought dry weather to **Portland, OR**, which observed 34 consecutive days with precipitation (trace or more) before it ended on December 23. This matched other 34-day streaks (11/10-12/13/53, 12/29/49-1/31/50, and 11/12-12/15/48).

Bitterly cold weather persisted in **Alaska** until midweek, helping to hold weekly temperatures as much as 24°F below normal at **Bethel**. Between December 18-20, lows plunged to near -50°F (-49°F at **Bethel**; -48°F at **Northway**; -47°F at **Ft. Yukon** and **Galena**; -46°F at **Gulkana**). However, milder weather and light precipitation overspread much of the State thereafter. **King Salmon, AK**, noted three consecutive daily-record lows (-32, -37, and -38°F) from December 17-19, then abruptly warmed to 29°F on the 19th, representing a rise of 67°F in less than 24 hours. Meanwhile, relatively quiet weather prevailed in **Hawaii**. Some of the heaviest 24-hour totals were observed on the **Big Island** on December 17-18, when rainfall included 2.00 inches in **Honokaa** and 1.54 inches in **Glenwood**.

National Weather Data for Selected Cities

Weather Data for the Week Ending December 22, 2001

Data Provided by Climate Prediction Center (301-763-8000, Ext. 7503)

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	62	40	69	29	51	7	0.46	-0.71	0.46	4.34	121	66.21	125	85	42	0	2	1	0
	HUNTSVILLE	59	38	65	27	48	6	0.61	-0.74	0.61	5.40	129	62.70	113	84	53	0	3	1	1
	MOBILE	68	45	76	32	56	4	0.40	-0.81	0.38	1.67	45	53.52	86	93	59	0	1	3	0
	MONTGOMERY	64	40	74	27	52	3	1.18	-0.01	1.18	2.86	78	47.20	91	99	55	0	3	1	1
AK	ANCHORAGE	14	-1	36	-15	6	-10	0.01	-0.24	0.01	0.13	17	13.60	87	84	71	0	7	1	0
	BARROW	-16	-23	-8	-27	-20	-8	0.00	-0.03	0.00	0.01	11	4.97	112	79	74	0	7	0	0
	FAIRBANKS	-3	-27	31	-41	-15	-8	0.02	-0.17	0.01	0.08	13	8.36	79	79	72	0	7	2	0
	JUNEAU	29	20	37	7	24	-3	0.50	-0.50	0.27	2.97	95	57.67	109	92	83	0	5	5	0
	KODIAK	28	16	38	4	22	-8	1.78	0.21	0.93	3.01	64	71.52	109	80	69	0	7	5	1
	NOME	-2	-18	7	-27	-10	-17	0.04	-0.15	0.04	0.04	7	12.73	87	75	66	0	7	1	0
AZ	FLAGSTAFF	44	10	52	0	27	-2	0.04	-0.51	0.04	0.89	52	17.17	78	82	25	0	7	1	0
	PHOENIX	66	42	77	37	54	0	0.00	-0.22	0.00	0.89	129	6.73	92	66	37	0	0	0	0
	TUCSON	65	34	79	29	50	-1	0.00	-0.25	0.00	0.61	81	7.83	67	74	45	0	4	0	0
	YUMA	65	43	71	38	54	-2	0.00	-0.11	0.00	0.01	3	3.32	109	***	***	0	0	0	0
AR	FORT SMITH	59	34	67	26	47	8	3.80	3.14	3.58	5.72	250	40.68	101	91	50	0	4	3	1
	LITTLE ROCK	57	37	61	29	47	5	3.64	2.57	3.00	8.20	230	50.52	102	96	50	0	2	3	1
CA	BAKERSFIELD	61	40	68	31	50	3	0.29	0.15	0.20	0.65	151	7.34	133	88	63	0	1	2	0
	FRESNO	53	39	57	32	46	1	0.26	-0.06	0.21	0.65	67	10.72	106	94	81	0	1	5	0
	LOS ANGELES	61	45	63	42	53	-3	0.07	-0.30	0.07	0.53	46	18.84	164	85	61	0	0	1	0
	REDDING	47	42	49	38	45	1	2.42	1.18	0.69	7.15	185	34.00	107	98	90	0	0	7	2
	SACRAMENTO	51	43	54	39	47	2	1.48	0.92	0.91	4.11	240	19.09	114	97	71	0	0	5	1
	SAN DIEGO	62	45	71	42	54	-3	0.19	-0.17	0.19	0.45	40	8.52	90	86	61	0	0	1	0
	SAN FRANCISCO	55	47	58	42	51	2	1.58	0.88	0.50	5.95	285	23.56	126	90	79	0	0	5	1
	STOCKTON	52	40	55	34	46	2	0.71	0.24	0.41	2.29	157	12.71	96	97	82	0	0	4	0
CO	ALAMOSA	38	0	45	-4	19	3	0.00	-0.11	0.00	0.02	6	9.76	130	82	53	0	7	0	0
	CO SPRINGS	46	18	58	13	32	3	0.06	-0.05	0.04	0.06	17	15.00	93	83	26	0	7	2	0
	DENVER INTL	45	20	56	9	32	3	0.03	-0.04	0.02	0.15	68	15.34	113	81	42	0	7	2	0
	GRAND JUNCTION	35	13	37	6	24	-4	0.00	-0.14	0.00	0.26	60	8.35	99	89	72	0	7	0	0
	PUEBLO	52	11	67	5	32	2	0.10	0.02	0.08	0.14	44	11.57	104	84	46	0	7	2	0
CT	BRIDGEPORT	47	34	50	26	40	7	0.73	-0.05	0.52	1.50	60	34.80	86	78	46	0	3	2	1
	HARTFORD	41	28	47	20	34	6	0.87	-0.01	0.55	1.68	60	33.32	77	88	55	0	6	2	1
DC	WASHINGTON	51	37	58	29	44	6	0.12	-0.58	0.10	1.20	54	29.71	79	77	44	0	1	2	0
DE	WILMINGTON	49	33	57	26	41	6	0.32	-0.47	0.23	1.49	60	33.37	84	90	47	0	3	2	0
FL	DAYTONA BEACH	73	52	81	44	63	3	0.09	-0.49	0.09	0.21	12	58.15	123	96	54	0	0	1	0
	JACKSONVILLE	71	44	79	34	57	3	0.10	-0.53	0.05	2.73	147	48.77	97	96	49	0	0	4	0
	KEY WEST	78	69	81	65	73	2	0.00	-0.44	0.00	1.39	95	45.30	116	81	63	0	0	0	0
	MIAMI	79	66	84	59	73	4	0.00	-0.41	0.00	1.78	135	70.60	127	79	57	0	0	0	0
	ORLANDO	75	54	83	46	64	2	0.08	-0.39	0.08	0.18	12	55.02	116	94	54	0	0	1	0
	PENSACOLA	68	48	77	39	58	5	0.63	-0.36	0.61	0.84	28	46.04	76	87	51	0	0	3	1
	TALLAHASSEE	70	43	77	31	56	3	0.27	-0.89	0.27	0.41	12	63.14	98	92	50	0	2	1	0
	TAMPA	76	57	85	49	67	5	0.43	-0.07	0.43	0.59	39	39.48	91	91	54	0	0	1	0
	WEST PALM	77	62	81	53	70	3	0.21	-0.31	0.12	1.67	91	65.61	109	83	65	0	0	3	0
GA	ATHENS	61	38	70	29	50	6	0.59	-0.34	0.59	1.18	41	39.38	81	81	49	0	2	1	1
	ATLANTA	60	39	66	31	50	6	0.83	-0.16	0.83	1.69	56	38.27	77	76	45	0	2	1	1
	AUGUSTA	65	34	77	23	50	4	0.16	-0.63	0.16	1.00	43	33.61	77	85	39	0	3	1	0
	COLUMBUS	65	44	76	34	55	7	0.93	-0.22	0.92	1.64	47	38.43	78	81	38	0	0	2	1
	MACON	65	38	76	27	51	3	0.47	-0.54	0.46	1.54	52	47.15	109	91	40	0	2	2	0
	SAVANNAH	67	39	76	28	53	2	0.13	-0.56	0.12	0.47	23	31.46	65	94	48	0	2	2	0
HI	HILO	79	66	80	64	73	1	2.65	0.01	0.81	13.79	155	112.5	89	93	84	0	0	6	2
	HONOLULU	82	71	83	65	76	2	0.02	-0.86	0.01	0.36	13	8.75	42	81	71	0	0	2	0
	KAHULUI	80	67	81	60	74	1	0.28	-0.48	0.14	2.41	109	9.97	50	86	76	0	0	3	0
	LIHUE	79	70	81	63	74	1	0.35	-0.81	0.14	1.38	38	29.34	71	88	78	0	0	6	0
ID	BOISE	40	28	46	20	34	5	0.08	-0.22	0.02	1.02	106	8.36	71	89	73	0	6	4	0
	LEWISTON	42	30	48	26	36	2	0.09	-0.19	0.05	0.51	59	10.75	89	86	77	0	6	3	0
	POCATELLO	32	17	36	10	25	1	0.09	-0.16	0.08	1.03	132	7.06	60	90	76	0	7	2	0
IL	CHICAGO/O'HARE	44	30	49	22	37	12	0.47	-0.07	0.17	1.01	55	45.78	130	87	65	0	4	4	0
	MOLINE	45	27	50	20	36	12	0.15	-0.35	0.13	0.58	35	39.87	104	88	63	0	6	2	0
	PEORIA	45	29	49	24	37	11	0.78	0.24	0.35	1.37	76	37.72	106	96	71	0	6	4	0
	ROCKFORD	43	28	48	19	36	13	0.35	-0.10	0.13	0.94	61	37.03	104	91	66	0	6	3	0
	SPRINGFIELD	47	30	50	24	38	10	0.92	0.30	0.41	1.60	79	34.52	100	90	70	0	6	3	0
IN	EVANSVILLE	51	37	58	27	44	10	4.67	3.85	2.26	7.08	263	49.89	118	82	70	0	1	3	2
	FORT WAYNE	45	32	48	23	39	12	0.63	-0.02	0.41	1.83	86	42.92	126	88	59	0	4	4	0
	INDIANAPOLIS	48	32	52	23	40	10	1.47	0.72	0.76	3.04	124	41.93	107	93	64	0	3	3	2
	SOUTH BEND	44	31	48	22	38	10	0.51	-0.23	0.24	1.36	56	37.92	99	87	67	0	3	4	0
IA	BURLINGTON	46	29	51	22	37	12	0.51	0.07	0.46	0.99	67	38.67	109	91	59	0	6	3	0
	CEDAR RAPIDS	44	25	50	16	34	13	0.44	0.09	0.38	1.03	87	35.69	107	92	57	0	6	2	0
	DES MOINES	46	25	50	21	36	13	0.29	0.00	0.23	0.93	95	28.42	87	83	63	0	6	2	0
	DUBUQUE	42	26	47	17	34	14	0.36	-0.07	0.32	1.31	89	34.79	92	87	66	0	6	2	0
	SIOUX CITY	44	17	50	13	31	11	0.00	-0.17	0.00	0.12	21	30.24	118	84	54	0	7	0	0
	WATERLOO	44	22	49	14	33	14	0.41	0.13	0.25	0.71	72	34.75	104	89	67	0	6	2	0
KS	CONCORDIA	49	24	55	16	37	8	0.01	-0.18	0.01	0.07	11	27.21	95	74	58	0	7	1	0
	DODGE CITY	53	24	62	15	38	6	0.00	-0.14	0.00	0.03	6	18.35	86	81	31	0	7	0	0
	GOODLAND	50	22	61	17	36	7	0.25	0.17	0.25	0.63	210	17.01	94	85	52	0	7	1	0
	TOPEKA	53	28	57	23	40	10	0.00	-0.31	0.00	0.15	14	42.72	123	80	53	0	5	0	0

Based on 1961-90 normals

*** Not Available

Weather Data for the Week Ending December 22, 2001

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	55	28	68	23	41	9	0.00	-0.26	0.00	0.08	9	24.49	84	80	51	0	5	0	0
KY	JACKSON	55	35	67	26	45	8	0.51	-0.48	0.39	2.31	73	34.89	72	83	39	0	3	3	0
	LEXINGTON	53	33	61	23	43	8	0.91	0.00	0.56	2.58	89	40.02	92	81	56	0	4	4	1
	LOUISVILLE	54	36	63	29	45	9	2.43	1.62	1.22	4.37	164	45.76	105	90	56	0	4	4	2
	PADUCAH	52	32	58	23	42	6	5.60	4.54	2.71	8.67	254	54.99	114	97	59	0	4	3	3
LA	BATON ROUGE	69	45	82	32	57	5	0.83	-0.44	0.60	3.66	93	61.76	104	99	45	0	1	2	1
	LAKE CHARLES	69	47	79	37	58	5	1.18	0.02	0.77	4.64	130	56.28	105	94	49	0	0	4	1
	NEW ORLEANS	69	51	79	37	60	6	1.14	-0.18	0.63	2.17	53	68.78	114	84	64	0	0	2	2
	SHREVEPORT	63	39	72	31	51	4	0.68	-0.23	0.67	6.10	207	59.37	132	95	54	0	2	2	1
ME	CARIBOU	28	17	31	14	22	9	0.04	-0.68	0.03	0.34	14	28.78	81	86	65	0	7	2	0
	PORTLAND	36	24	41	20	30	5	0.84	-0.17	0.37	1.57	47	32.75	76	88	66	0	7	4	0
MD	BALTIMORE	49	31	57	24	40	4	0.24	-0.53	0.20	1.46	60	34.06	86	75	44	0	4	2	0
MA	BOSTON	41	32	47	28	37	5	0.86	-0.04	0.44	2.06	71	30.67	76	81	50	0	4	2	0
	WORCESTER	36	27	41	22	32	6	1.07	0.16	0.57	2.13	73	32.65	70	90	53	0	7	3	1
MI	ALPENA	38	26	41	19	32	9	0.22	-0.23	0.08	1.44	98	27.05	96	94	72	0	6	5	0
	GRAND RAPIDS	42	30	46	20	36	10	0.61	-0.02	0.34	1.26	60	39.59	112	92	63	0	4	4	0
	HOUGHTON LAKE	36	27	41	21	32	11	0.20	-0.23	0.12	0.58	41	28.27	102	91	78	0	6	4	0
	LANSING	41	30	45	21	36	11	0.37	-0.15	0.16	1.11	64	31.84	106	88	69	0	5	4	0
	MUSKEGON	43	29	46	20	36	8	0.43	-0.25	0.24	1.13	51	34.72	109	85	69	0	5	4	0
	TRAVERSE CITY	38	27	42	20	32	8	0.15	-0.32	0.09	1.24	81	31.01	106	98	68	0	6	4	0
MN	DULUTH	33	21	39	10	27	16	0.09	-0.19	0.05	0.27	30	29.71	100	91	70	0	7	2	0
	INT'L FALLS	31	15	39	0	23	18	0.05	-0.14	0.05	0.27	44	27.56	114	91	69	0	7	1	0
	MINNEAPOLIS	40	24	45	18	32	15	0.41	0.18	0.41	0.60	76	34.09	122	81	61	0	6	1	0
	ROCHESTER	39	23	44	16	31	15	0.32	0.10	0.31	1.31	170	39.01	133	91	72	0	7	2	0
	ST. CLOUD	37	21	42	11	29	16	0.10	-0.08	0.10	0.18	30	28.46	105	90	58	0	7	1	0
MS	JACKSON	65	41	78	29	53	6	0.59	-0.76	0.59	3.45	82	62.26	116	96	51	0	1	1	1
	MERIDIAN	65	39	72	29	52	4	1.22	-0.19	1.15	4.76	110	68.42	125	99	59	0	3	3	1
	TUPELO	60	38	67	27	49	6	1.24	-0.17	0.66	5.82	132	66.87	124	92	57	0	2	4	2
MO	COLUMBIA	52	30	60	22	41	10	0.41	-0.13	0.21	1.46	79	40.61	106	88	53	0	5	3	0
	KANSAS CITY	51	29	58	24	40	11	0.01	-0.34	0.01	0.77	66	53.49	144	80	53	0	6	1	0
	SAINT LOUIS	51	33	58	28	42	9	1.80	1.13	1.17	3.50	155	35.35	96	83	61	0	5	3	1
	SPRINGFIELD	54	29	62	22	41	7	1.47	0.77	1.27	3.52	148	45.30	107	89	58	0	6	2	1
MT	BILLINGS	36	20	48	11	28	3	0.00	-0.18	0.00	0.16	30	10.95	74	73	49	0	6	0	0
	BUTTE	33	9	40	-2	21	4	0.02	-0.09	0.02	0.08	24	10.61	88	86	50	0	7	1	0
	GLASGOW	36	13	52	4	25	11	0.00	-0.08	0.00	0.00	0	12.70	117	82	65	0	7	0	0
	GREAT FALLS	36	14	48	2	25	2	0.35	0.16	0.35	0.38	66	10.20	68	68	39	0	7	1	0
	HAVRE	38	9	54	-7	23	7	0.00	-0.13	0.00	0.01	3	6.90	63	73	56	0	7	0	0
	KALISPELL	32	19	43	5	26	4	0.06	-0.34	0.03	0.44	36	12.42	78	82	70	0	7	4	0
	MISSOULA	35	19	46	14	27	4	0.35	0.07	0.20	0.66	83	12.82	98	91	81	0	7	4	0
NE	GRAND ISLAND	40	22	55	12	33	9	0.01	-0.14	0.01	0.05	9	23.06	93	83	56	0	7	1	0
	LINCOLN	48	20	52	15	34	10	0.13	-0.06	0.11	0.32	48	32.22	115	81	58	0	7	2	0
	NORFOLK	45	20	54	14	32	10	0.00	-0.17	0.00	0.01	2	27.49	110	81	45	0	7	0	0
	NORTH PLATTE	43	15	56	9	29	6	0.00	-0.11	0.00	0.08	23	23.72	124	89	42	0	7	0	0
	OMAHA	48	21	53	16	34	10	0.32	0.10	0.31	0.68	89	28.47	96	84	65	0	7	2	0
	SCOTTSBLUFF	46	17	59	12	32	7	0.00	-0.14	0.00	0.00	0	13.04	86	77	48	0	7	0	0
	VALENTINE	42	15	53	6	29	8	0.00	-0.08	0.00	0.00	0	20.58	113	82	52	0	7	0	0
NV	ELY	37	6	42	-6	22	-3	0.08	-0.09	0.08	0.24	46	6.31	63	81	58	0	7	1	0
	LAS VEGAS	51	34	55	29	42	-3	0.00	-0.08	0.00	0.00	0	3.85	96	75	49	0	3	0	0
	RENO	47	27	54	21	37	5	0.04	-0.18	0.03	1.36	197	3.92	54	85	55	0	6	2	0
	WINNEMUCCA	41	28	47	20	34	5	0.12	-0.07	0.09	0.68	106	4.65	58	85	66	0	6	2	0
NH	CONCORD	35	23	40	16	29	6	0.69	-0.01	0.53	1.76	76	30.71	86	88	63	0	7	2	1
NJ	NEWARK	49	36	58	30	42	7	0.55	-0.22	0.28	1.52	61	30.75	72	74	43	0	2	2	0
NM	ALBUQUERQUE	48	25	57	22	36	2	0.00	-0.11	0.00	0.07	20	6.35	73	65	30	0	7	0	0
NY	ALBANY	38	26	44	19	32	7	0.54	-0.11	0.35	1.74	81	28.57	81	91	61	0	7	3	0
	BINGHAMTON	36	28	43	23	32	7	1.17	0.50	0.75	2.07	95	34.09	94	89	74	0	6	4	1
	BUFFALO	40	32	47	25	36	8	0.69	-0.13	0.49	1.77	66	30.44	81	91	70	0	4	5	0
	ROCHESTER	39	31	45	24	35	7	0.40	-0.21	0.31	1.41	71	28.87	92	87	73	0	4	3	0
	SYRACUSE	38	30	47	22	34	7	1.10	0.40	0.48	2.06	87	34.19	90	94	72	0	4	5	0
NC	ASHEVILLE	53	30	60	21	42	3	0.80	0.00	0.79	2.18	86	34.31	74	84	45	0	4	2	1
	CHARLOTTE	58	32	64	23	45	3	0.55	-0.25	0.55	1.87	77	26.15	62	85	39	0	4	1	1
	GREENSBORO	55	33	62	25	44	4	0.61	-0.16	0.61	1.96	82	29.60	71	80	41	0	4	1	1
	HATTERAS	60	46	70	32	53	5	0.35	-0.67	0.31	1.79	56	28.91	53	80	54	0	1	2	0
	RALEIGH	58	30	70	22	44	2	0.43	-0.31	0.43	1.87	82	34.85	86	81	47	0	5	1	0
	WILMINGTON	63	36	72	27	50	2	0.28	-0.55	0.26	1.30	51	37.99	71	96	36	0	2	2	0
ND	BISMARCK	35	11	50	0	23	10	0.06	-0.05	0.05	0.12	34	21.37	140	83	64	0	7	2	0
	DICKINSON	34	14	48	5	24	8	0.00	-0.08	0.00	0.12	46	18.51	116	84	46	0	7	0	0
	FARGO	33	15	38	8	24	14	0.02	-0.12	0.02	0.02	5	20.12	105	90	65	0	7	1	0
	GRAND FORKS	29	12	34	2	21	12	0.06	-0.08	0.05	0.14	33	21.46	118	92	67	0	7	2	0
	JAMESTOWN	33	14	43	5	24	13	0.02	-0.09	0.02	0.07	20	20.18	120	94	64	0	7	1	0
	WILLISTON	28	3	40	-7	16	4	0.01	-0.13	0.01	0.61	149	13.75	102	85	74	0	7	1	0
OH	AKRON-CANTON	43	28	49	22	36	8	1.34	0.68	1.28	2.11	98	32.68	91	86	66	0	6	4	1
	CINCINNATI	50	32	60	22	41	9	2.08	1.38	1.07	3.50	152	46.00	114	84	58	0	5	2	2
	CLEVELAND	44	32	49	24	38	8	1.26	0.57	1.06	2.19	96	34.02	95	91	65	0	3	3	1
	COLUMBUS	46	31	53	24	39	8	1.87	1.24	1.66	2.66	126	36.53	98	85	62	0	5	3	1
	DAYTON	46	32	51	23	39	8	2.50	1.85	1.74	3.60	167	42.17	118	89	59	0	4	3	2
	MANSFIELD	42	29	48	22	36	7	1.10	0.42	0.93	1.80	79	33.27	86	91	61	0	6	3	1

Based on 1961-90 normals

*** Not Available

Weather Data for the Week Ending December 22, 2001

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS TEMP. °F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	44	33	48	22	39	12	0.99	0.33	0.53	1.96	90	33.87	105	86	63	0	3	4	1
	YOUNGSTOWN	42	28	50	17	35	7	1.03	0.38	0.94	1.53	71	28.92	79	88	69	0	6	4	1
OK	OKLAHOMA CITY	57	33	66	30	45	7	0.56	0.26	0.56	0.86	83	29.02	88	89	43	0	4	1	1
	TULSA	58	36	65	30	47	9	1.63	1.17	1.46	2.19	134	29.16	73	76	53	0	2	2	1
OR	ASTORIA	48	41	54	34	44	2	3.86	1.48	2.20	11.64	155	60.70	96	94	86	0	0	6	2
	BURNS	33	13	40	2	23	-1	0.15	-0.10	0.10	0.88	106	8.24	85	87	80	0	7	5	0
	EUGENE	49	38	56	33	44	3	1.31	-0.63	0.47	5.54	90	26.84	57	96	91	0	0	7	0
	MEDFORD	47	35	55	32	41	4	0.80	0.06	0.27	3.62	151	14.31	80	97	74	0	1	6	0
	PENDLETON	46	31	55	27	39	5	0.07	-0.29	0.04	0.52	45	10.23	89	87	73	0	6	4	0
	PORTLAND	48	39	57	31	43	3	1.70	0.30	0.88	6.26	143	30.12	87	95	82	0	1	6	1
	SALEM	48	37	56	32	42	2	1.74	0.20	0.87	7.56	155	33.26	89	97	90	0	3	6	1
PA	ALLENTOWN	46	30	51	24	38	7	0.50	-0.28	0.33	0.96	38	35.05	82	78	49	0	5	2	0
	ERIE	43	32	48	25	38	8	1.04	0.24	0.82	1.89	71	31.87	78	84	66	0	4	5	1
	MIDDLETOWN	47	33	56	25	40	7	0.54	-0.18	0.39	1.75	74	25.64	65	92	60	0	3	2	0
	PHILADELPHIA	49	35	58	27	42	7	0.39	-0.38	0.23	1.56	64	30.47	75	76	47	0	2	2	0
	PITTSBURGH	44	28	55	19	36	6	1.79	1.13	1.65	2.35	113	35.65	99	87	56	0	6	4	1
	WILKES-BARRE	42	31	48	25	36	7	0.55	-0.01	0.40	1.01	55	27.38	77	88	55	0	3	2	0
	WILLIAMSPORT	42	31	47	24	37	7	0.50	-0.17	0.33	1.48	66	34.97	88	82	61	0	4	3	0
RI	PROVIDENCE	42	30	48	25	36	4	0.86	-0.13	0.59	1.65	52	39.30	89	85	54	0	6	2	1
SC	BEAUFORT	66	41	75	33	54	3	0.11	-0.63	0.11	0.23	11	43.36	86	97	44	0	0	1	0
	CHARLESTON	67	40	77	29	54	3	0.25	-0.48	0.24	1.74	80	40.07	79	92	48	0	2	2	0
	COLUMBIA	63	35	75	25	49	3	0.17	-0.66	0.17	1.19	49	28.00	57	85	45	0	3	1	0
	GREENVILLE	57	35	64	25	46	3	0.61	-0.33	0.61	1.97	68	40.11	80	79	39	0	3	1	1
SD	ABERDEEN	33	14	37	6	23	9	0.03	-0.05	0.03	0.03	10	22.59	123	87	69	0	7	1	0
	HURON	36	17	41	8	26	9	0.01	-0.10	0.01	0.01	3	26.76	134	91	59	0	7	1	0
	RAPID CITY	44	17	58	10	30	7	0.00	-0.11	0.00	0.00	0	14.46	88	71	30	0	7	0	0
	SIOUX FALLS	40	19	45	14	29	12	0.00	-0.15	0.00	0.02	4	30.10	127	85	64	0	7	0	0
TN	BRISTOL	55	29	69	19	42	5	0.75	-0.02	0.73	3.23	135	41.58	105	91	44	0	5	3	1
	CHATTANOOGA	59	37	64	27	48	8	1.26	0.07	1.26	4.74	128	54.66	105	89	43	0	3	1	1
	KNOXVILLE	56	34	68	25	45	6	0.69	-0.36	0.69	4.19	130	42.06	92	83	46	0	4	1	1
	MEMPHIS	60	39	69	29	50	7	5.01	3.71	1.91	10.20	243	66.00	131	87	49	0	1	3	3
	NASHVILLE	58	36	64	25	47	7	0.35	-0.69	0.25	3.04	91	48.63	106	84	47	0	3	3	0
TX	ABILENE	60	37	67	34	49	4	0.98	0.76	0.98	0.98	132	21.85	91	77	52	0	0	1	1
	AMARILLO	59	27	67	21	43	7	0.00	-0.08	0.00	0.09	30	18.53	95	76	24	0	7	0	0
	AUSTIN	68	37	74	25	52	1	0.30	-0.11	0.30	4.49	328	39.30	125	96	57	0	3	1	0
	BEAUMONT	68	47	78	38	58	4	0.97	-0.10	0.57	1.86	55	68.63	123	10	55	0	0	3	1
	BROWNSVILLE	76	54	84	45	65	4	0.00	-0.28	0.00	0.94	108	16.79	64	93	50	0	0	0	0
	CORPUS CHRISTI	71	51	79	42	61	3	0.00	-0.28	0.00	1.70	195	39.47	133	97	65	0	0	0	0
	DEL RIO	67	43	74	37	55	4	0.00	-0.14	0.00	0.36	82	9.62	53	79	49	0	0	0	0
	EL PASO	58	28	70	23	43	0	0.00	-0.14	0.00	0.05	12	4.21	49	62	25	0	6	0	0
	FORT WORTH	62	38	69	31	50	4	1.95	1.54	1.64	3.29	247	38.16	115	87	42	0	1	3	1
	GALVESTON	67	54	74	47	61	5	1.30	0.50	0.93	2.41	96	58.56	142	92	66	0	0	2	1
	HOUSTON	67	44	76	35	56	3	0.40	-0.37	0.33	5.87	239	70.94	157	97	64	0	0	2	0
	LUBBOCK	60	29	68	24	44	4	0.00	-0.11	0.00	0.02	5	15.38	83	76	39	0	6	0	0
	MIDLAND	61	32	72	29	46	2	0.04	-0.09	0.04	0.10	23	9.93	67	71	39	0	4	1	0
	SAN ANGELO	63	34	69	26	49	4	0.05	-0.12	0.05	0.13	23	18.54	92	84	50	0	1	1	0
	SAN ANTONIO	69	40	76	33	54	3	0.01	-0.30	0.01	3.26	294	36.58	120	93	42	0	0	1	0
	VICTORIA	69	47	77	36	58	3	0.33	-0.11	0.31	3.57	246	42.83	116	94	62	0	0	3	0
	WACO	64	41	71	31	52	5	1.36	0.95	0.01	4.03	296	35.69	113	91	67	0	2	3	1
	WICHITA FALLS	60	36	68	32	48	6	0.92	0.63	0.92	1.10	117	17.45	61	84	52	0	1	1	1
UT	SALT LAKE CITY	32	13	42	9	23	-6	0.24	-0.08	0.13	1.28	124	14.51	92	96	72	0	7	3	0
VT	BURLINGTON	32	23	38	10	28	6	0.56	0.03	0.25	1.48	82	23.48	69	93	71	0	6	4	0
VA	LYNCHBURG	50	29	55	18	40	2	0.40	-0.33	0.37	2.75	118	32.06	80	81	42	0	3	2	0
	NORFOLK	55	38	70	29	47	4	0.24	-0.50	0.24	1.66	75	33.19	76	80	43	0	1	1	0
	RICHMOND	55	32	65	25	43	4	0.45	-0.29	0.43	1.44	62	31.26	74	81	44	0	3	2	0
	ROANOKE	51	32	56	23	42	5	0.33	-0.33	0.33	2.19	102	24.78	62	78	44	0	2	1	0
	WASH/DULLES	50	30	58	19	40	6	0.13	-0.59	0.11	1.33	58	36.77	93	70	46	0	5	2	0
WA	OLYMPIA	44	33	51	27	39	1	3.74	1.92	3.08	11.75	204	49.58	103	98	86	0	4	5	1
	QUILLAYUTE	45	34	51	30	39	-1	2.19	-1.30	0.91	15.48	140	95.51	95	97	77	0	4	6	2
	SEATTLE-TACOMA	45	36	51	33	41	1	1.53	0.20	1.26	5.69	134	36.63	103	90	75	0	0	4	1
	SPOKANE	36	25	44	22	31	4	0.37	-0.18	0.22	1.92	111	13.57	86	94	73	0	7	3	0
	YAKIMA	40	26	55	15	33	4	0.33	0.00	0.16	1.23	123	6.95	92	95	77	0	5	3	0
WV	BECKLEY	48	29	57	22	39	6	0.63	-0.11	0.45	2.21	95	35.76	89	79	59	0	5	3	0
	CHARLESTON	53	31	65	21	42	6	0.54	-0.22	0.30	2.08	85	41.39	100	91	40	0	5	3	0
	ELKINS	51	25	65	13	38	7	0.96	0.17	0.46	2.02	81	39.43	90	94	43	0	6	4	0
	HUNTINGTON	52	31	62	21	42	6	0.47	-0.29	0.40	1.95	81	34.53	85	90	44	0	5	3	0
WI	EAU CLAIRE	38	22	43	12	30	15	0.35	0.10	0.32	0.92	115	36.17	116	90	52	0	6	2	0
	GREEN BAY	39	28	45	20	33	14	0.19	-0.14	0.10	1.15	100	27.59	97	92	65	0	6	2	0
	LA CROSSE	40	25	48	16	33	14	0.37	0.09	0.31	0.77	82	32.15	106	91	52	0	6	2	0
	MADISON	42	25	48	16	34	14	0.36	-0.05	0.29	1.04	76	38.41	126	82	65	0	6	2	0
	MILWAUKEE	44	31	55	24	37	14	0.28	-0.24	0.15	0.85	49	36.29	112	84	64	0	5	3	0
WY	CASPER	37	15	44	5	26	3	0.06	-0.08	0.05	0.07	15	6.78	55	79	56	0	7	2	0
	CHEYENNE	43	19	54	14	31	4	0.00	-0.08	0.00	0.03	10	13.14	92	66	31	0	6	0	0
	LANDER	30	9	39	-1	19	-1	0.00	-0.13	0.00	0.16	37	5.35	42	85	74	0	7	0	0
	SHERIDAN	37	13	53	2	25	3	0.00	-0.17	0.00	0.03	6	10.87	76	84	63	0	7	0	0

Based on 1961-90 normals

*** Not Available

NOTE: These data are preliminary and subject to change. In the past, precipitation totals from a number of stations were incomplete.

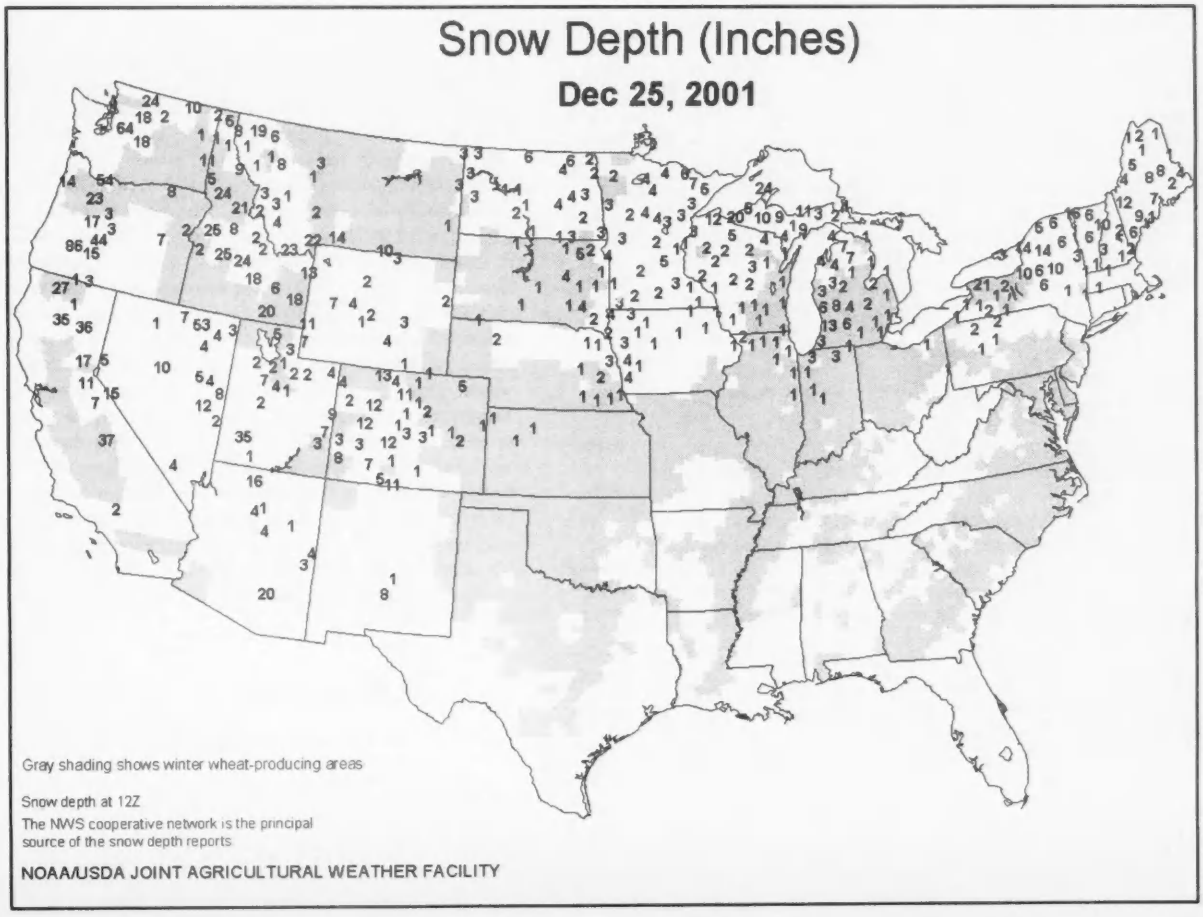
National Agricultural Summary

December 17 - 23, 2001

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Persistent rain saturated soils in the interior Mississippi Delta, adjacent areas of the southern Great Plains, and many areas along the Ohio River Valley. As a result, many rivers and streams remained above flood levels and water was standing in poorly drained fields. Many winter wheat fields in the Great Plains and Corn Belt remained green due to abnormally warm weather. However, vegetative growth in most fields was limited by sub-freezing over-night temperatures. In the Southeast, winter grains and forages received beneficial precipitation and above-normal temperatures promoted growth. Stormy weather persisted in the Pacific Coast States, producing heavy snow accumulations in the mountain ranges from central California to the Canadian border. California's valleys received light precipitation that reduced irrigation requirements, but also interfered with field and orchard work. Meanwhile, dry weather supported field and orchard activities in Florida.


Snow Depth (Inches)
Dec 25, 2001
Gray shading shows winter wheat-producing areas
Snow depth at 12Z
The NWS cooperative network is the principal source of the snow depth reports
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

International Weather and Crop Summary

December 16 - 22, 2001

International Weather and Crop Highlights and Summaries provided by USDA/WAOB

HIGHLIGHTS

EUROPE: Unusually cold weather continued across the continent, and snow cover likely remained sufficient in the coldest areas of eastern Europe, protecting winter grains from widespread winterkill.

FSU-WESTERN: A sufficient snow cover in most areas protected winter grains from continued bitterly cold weather.

MIDDLE EAST: Chronic wetness caused additional local flooding in western Turkey, but favorable showers overspread winter wheat areas from eastern Syria through Iran.

NORTHWESTERN AFRICA: Widespread rain continued to boost topsoil moisture for winter grain germination in Morocco.

SOUTH AFRICA: Scattered showers boosted moisture reserves in the eastern corn belt while somewhat drier weather allowed fieldwork in western growing areas.

SOUTHEAST ASIA: Lighter showers ease wetness in central Vietnam, while heavy showers returned to Java, Indonesia.

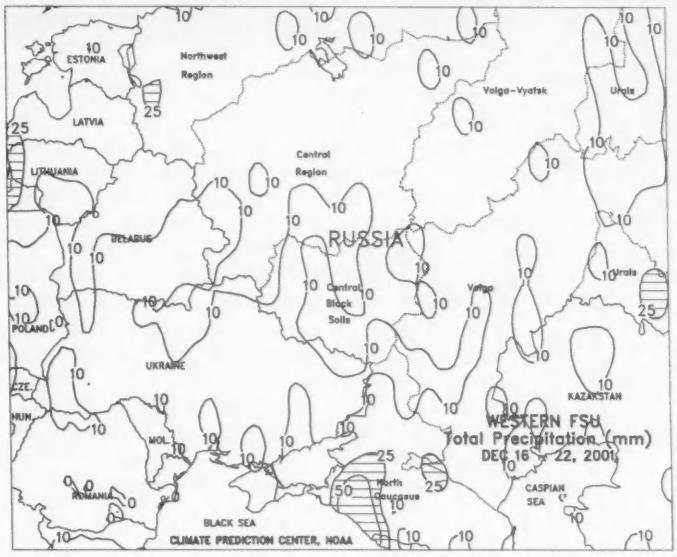
EASTERN ASIA: Seasonably cold weather kept winter wheat dormant in the North China Plain, while showers favored winter crops across the Yangtze Valley and southern China.

SOUTH AMERICA: Rain is needed to reduce stress on summer crops across parts of western Argentina, while light to moderate showers across southern Brazil continued to provide adequate to abundant moisture for crop development.

AUSTRALIA: Winter crop harvesting was winding down across Western Australia and the southeast.

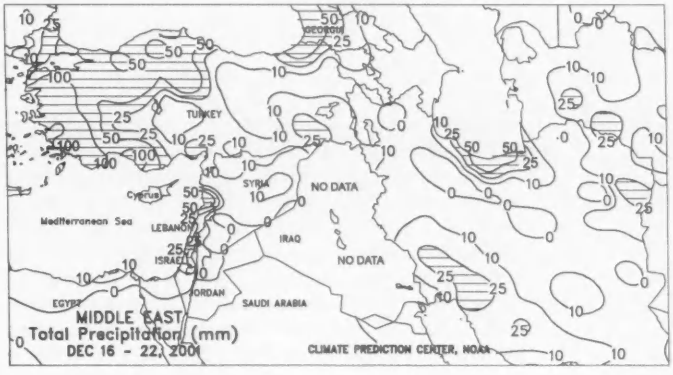
EUROPE

Scattered showers (5-20 mm or more) along southern coastal areas of the Iberian Peninsula and in southern Italy kept topsoils favorably moist for durum wheat. Mostly light, scattered precipitation (less than 10 mm) prevailed throughout the remainder of western Europe. Farther east, widespread precipitation (10-35 mm or more) boosted moisture supplies in Greece and the southern Balkans. Elsewhere in eastern Europe, light snow (3-20 mm or more of liquid equivalent) increased the snow pack. Unseasonably cold weather continued across the continent, slowing crop development considerably along the Mediterranean coast and keeping winter grains and oilseeds mostly dormant elsewhere. Temperatures averaged about 3 to 9 degrees C below normal in southern Europe and 1 to 3 degrees C below normal in northern Europe. Although minimum temperatures fell to as low as -17 degrees C in parts of southeastern Europe, a sufficient snow cover likely protected winter grains from potential winterkill. At week's end, minimum temperatures fell at or slightly below freezing (-2 to 0 degrees C) as far south as Mediterranean citrus areas.



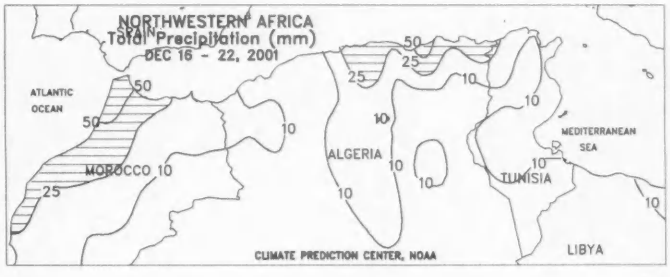
FSU-WESTERN

Intermittent light snow (mostly less than 10 mm of liquid equivalent) fell across Belarus, Ukraine, and much of southern Russia, maintaining a moderate to deep snow pack in these areas. Similarly, widespread, albeit heavier, snow (5-25 mm of liquid equivalent) maintained the deep snow pack across northern Russia. Bitterly cold weather continued to grip the region, with weekly temperatures averaging 5-11 degrees C below normal. Minimum temperatures fell to as low as -30 degrees C as far south as the northern tip of the North Caucasus region in Russia. Extreme minimum temperatures in southern Ukraine and the southern portion of the North Caucasus region in Russia ranged from -10 to -15 degrees C. In most of the major winter grain producing areas that experienced extreme cold (-30 to -20 degrees C), snow cover was likely deep enough to protect winter grains from the potential for widespread winterkill.



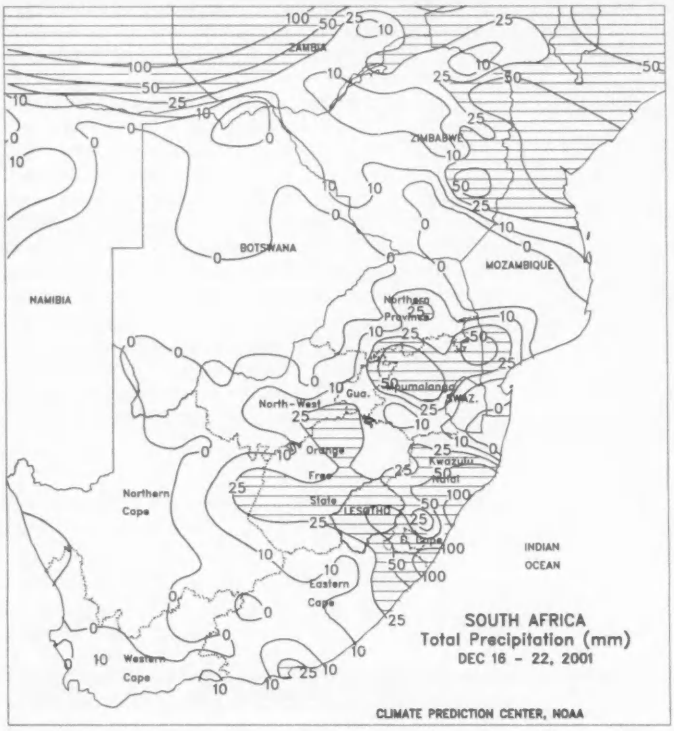
MIDDLE EAST

Heavy rain (50-100 mm or more) persisted over western Turkey, exacerbating flooding and possibly resulting in additional local crop damage. Lighter showers (5-25 mm or more) fell from eastern Turkey and Syria eastward through Iran, increasing moisture for vegetative to dormant winter wheat. Temperatures averaged 1 to 3 degrees C below normal in the main winter wheat areas of Turkey and Syria. Temperatures were low enough in the Anatolian Plateau to keep crops dormant while in southeastern Turkey and Syria, sub-freezing lows likely burned tender vegetation. In Iran, temperatures averaged above normal, but temperatures stayed low enough to keep crops in a dormant or semi-dormant state.



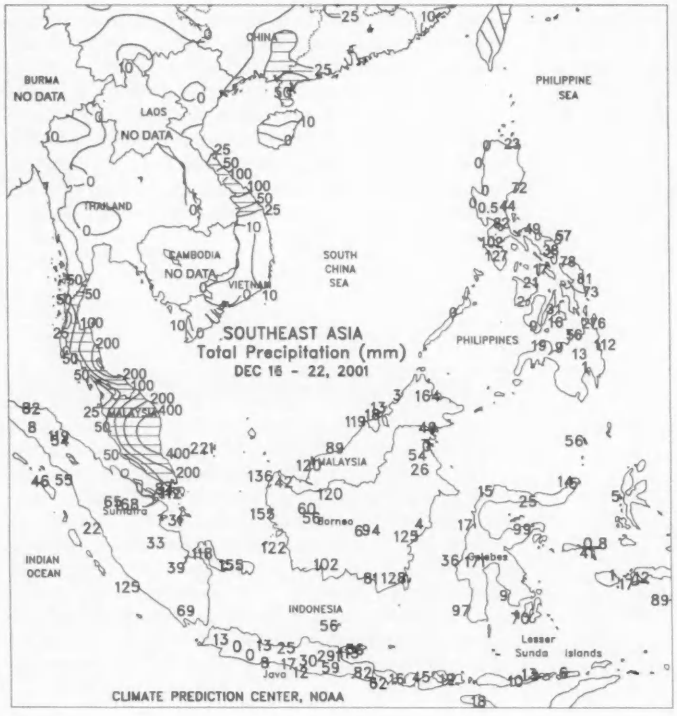
NORTHWESTERN AFRICA

In Morocco, the second consecutive week of light to moderate rain (15-25 mm or more) continued to increase topsoil moisture for winter grain planting and germination. In Algeria and Tunisia, widespread rain (8-25 mm) favored winter grains, although unseasonably cold weather slowed crop emergence and early plant establishment. Weekly temperatures averaged 1 to 3 degrees C above normal in Morocco, and 1 to 3 degrees C below normal in Algeria and Tunisia. Subsoil moisture remained limited throughout the region, and timely rain will be needed during the remainder of the growing season to ensure favorable crop prospects.



SOUTH AFRICA

A shift in the rainfall pattern brought beneficial showers (10-50 mm) to the eastern corn belt (northern Free State to northern Mpumalanga), boosting moisture reserves for development of vegetative summer crops. Scattered showers (10-25 mm) continued in the western corn belt but amounts were somewhat less than in recent weeks, allowing some late fieldwork to proceed. Highs across the corn belt ranged in the upper 20s and lower 30s degrees C, favoring summer crop development. Elsewhere, moderate to heavy rain (25-50 mm or more) continued in southern and central KwaZulu-Natal and neighboring locations in Eastern Cape, increasing irrigation reserves for sugarcane and other summer crops. Warmer, drier weather continued, however, in the more northerly sugarcane areas, increasing irrigation demands. Light showers (less than 10 mm) and seasonable temperatures were recorded in Western Cape, sustaining seasonable moisture requirements in vineyards and orchards.

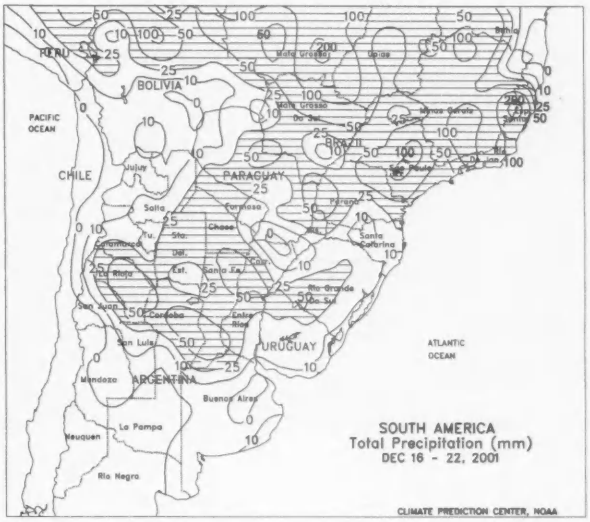


SOUTHEAST ASIA

Lighter showers (10-25 mm, in most areas) in central Vietnam helped to ease excessive wetness from last week's heavy showers. Showers (10-100 mm) fell along the eastern Philippines, continuing to increase moisture supplies for second season crops. Rainfall (25-100 or more) returned to eastern Java, Indonesia, easing unseasonable dryness. Heavy showers (25-200 mm, locally exceeding 400 mm) continued in Sumatra and peninsular Malaysia increasing moisture supplies for oil palm. Seasonably dry weather and temperatures 3 to 5 degrees C above normal favored rice fieldwork in Thailand.

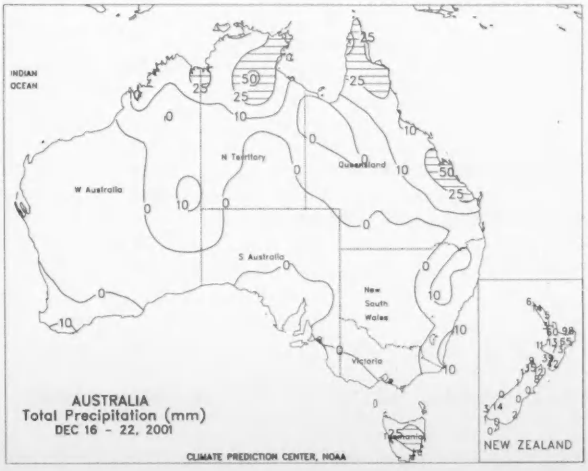
EASTERN ASIA

Seasonably cold weather kept winter wheat dormant across the North China Plain. Light to moderate rain (5-30 mm) continued to increase moisture supplies for winter crops across the southern North China Plain, Yangtze Valley, and southern China. Temperatures averaged near normal across the North China Plain and 1 to 3 degrees C below normal in interior southern China.



SOUTH AMERICA

In central Argentina, mostly dry weather prevailed from southern Cordoba and La Pampa eastward through western Buenos Aires, favoring winter wheat maturation and harvesting, but further reducing topsoil moisture for germinating to vegetative sorghum and sunflowerseed. Mostly dry weather in central and eastern Buenos Aires continued to dry out wet soils, alleviating excessive wetness. Farther north, late-week rains (25-50 mm or more) fell in central and northern Cordoba, Santa Fe, and northward through Chaco and Formosa, providing adequate to abundant moisture for summer crop development. The precipitation likely caused some late-week interruptions in fieldwork. Weekly temperatures averaged near to slightly above normal. Extreme maximum temperatures ranged from the lower 30s C in La Pampa and Buenos Aires, to the lower 40s farther north in Chaco and Formosa. Across southern Brazil, late-week showers (10-29 mm) eased developing dryness in Rio Grande Do Sul, boosting topsoil moisture for soybean development. Heavier showers (25-50 mm or more) fell farther north from Parana, northward through Mato Grosso Do Sul, into Goias and Mato Grosso, maintaining adequate to abundant soil moisture for soybeans, corn, cotton, sugarcane, coffee, and oranges. Rain (25-50 mm) benefited soybeans and cotton in western Bahia.



AUSTRALIA

Mostly dry, occasionally warm weather favored final harvest efforts in winter crop areas of Western Australia and the southeast (South Australia to southern New South Wales). Temperatures averaged near to slightly below normal, but highs reached the lower to middle 30s degrees C in most crop areas, aiding drydown. Rainfall tapered off from recent weeks in summer crop areas of east-central Australia (southern Queensland and northern New South Wales), with moderate showers (10-25 mm or more) confined to eastern cotton areas of New South Wales and Queensland's northern and central coastal sugarcane areas. Seasonable warmth (highs in the upper 30s to lower 40s degrees C) in the interior summer crop areas spurred cotton and sorghum growth. In New Zealand, mostly dry weather dominated crop and pasture areas of South Island. Variable showers (5-50 mm or more) covered North Island.

The index and/or ta
been removed a
separately within thi

For roll film users, thi
current volume year
of the microfilm. For
this information is
microfilm.

For microfiche user
contents is contained

table of contents has
and photographed
his volume year.

his information for the
ar is at the beginning
or a prior year volume,
is at the end of the

ers, the index and/or
ed on a separate fiche.

The *Weekly Weather and Crop Bulletin* (ISSN 0043-1974) is published weekly and jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the *Weekly Weather Chronicle*. It is issued under general authority of the Act of January 12, 1895 (44-USC 213), 53rd Congress, 3rd Session. NOAA is responsible for managing, printing, and distributing the bulletin. The contents may be reprinted freely, with proper credit.

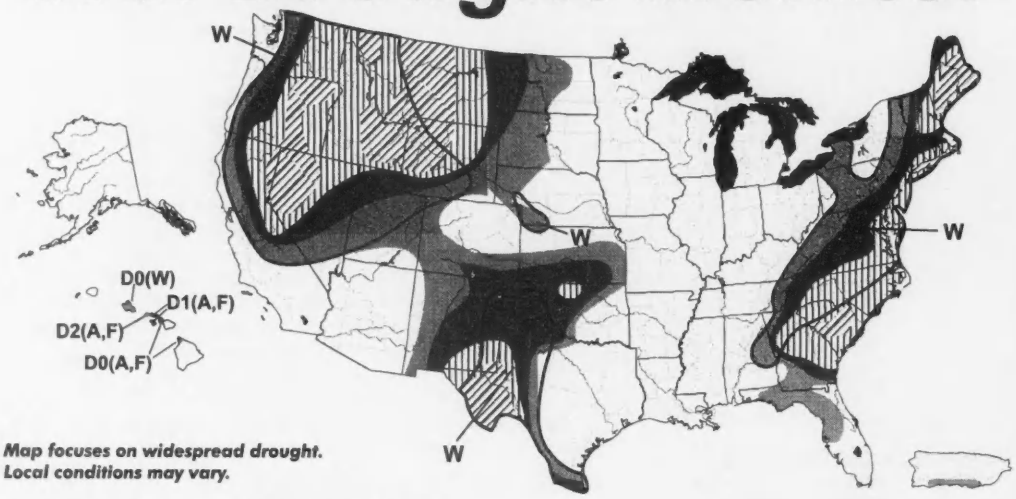
Annual subscriptions: domestic first class **$45**, foreign **$55** (in U.S. funds by international money order or check drawn on U.S. bank) payable to **U.S. Department of Commerce, NOAA**. POSTMASTER: Send address changes to: **Climate Prediction Center, W/NP52, Attn: *Weekly Weather and Crop Bulletin*, Room 605, WWBG, 5200 Auth Road, Camp Springs, MD 20746-4304**. Order subscriptions from the office and address listed above. First-class postage paid at Washington, DC, and other mailing offices. Correspondence to the meteorologists should be directed to: **Weekly Weather and Crop Bulletin, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 5844, Washington, DC 20250.** Internet URL: **http://www.usda.gov/oce/waob/jawf**; E-mail address: ***bmorris@oce.usda.gov***

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Climate Prediction Center
Managing Editor . . . . . ***David Miskus*** *(202) 720-7919*
Meteorologists . . . . . ***Eric Luebehusen, Brad Pugh,*** . . . . . and ***Chester Schmitt***
Subscriptions . . . . ***John Kopman*** (301) 763-8000 ext 7534
. . . . . **fax:** (301) 763-8125

U.S. DEPARTMENT OF AGRICULTURE
Economic Research Service
E.R.S. Editor . . . . . ***Sharon Lee***
National Agricultural Statistics Service
Agricultural Statistician . . . . . ***Mark Miller*** (202) 720-7621
State Summaries Editor . ***Delores Thomas*** (202) 720-8033
World Agricultural Outlook Board
International Editor . . . . . ***Tom Puterbaugh***
U.S. Editor . . . . . ***Brad Rippey*** (202) 720-2397
Agricultural Weather Analysts . . . . . ***Mark Brusberg*** . . . . . ***Bob Stefanski, Brian Morris,*** and ***Harlan Shannon***
Stoneville . . . . . ***Lee Crowley*** and ***Josh Stewart***

December 18, 2001 Valid 8 a.m. EST

U.S. Drought Monitor



Map focuses on widespread drought. Local conditions may vary.

D0 Abnormally Dry
D1 Drought–First Stage
D2 Drought–Severe
D3 Drought–Extreme
D4 Drought–Exceptional
Delineates Overlapping Areas

Drought Impact Types:
A = Agriculture
W = Water (Hydrological)
F = Fire danger (Wildfires)
(No type = All 3 impacts)

USDA National Drought Mitigation Center

See accompanying text summary for forecast statements
http://enso.unl.edu/monitor/monitor.html

● ***Released Thursday, December 20, 2001*** ●
Author: *David Miskus, JAWF/CPC/NOAA*

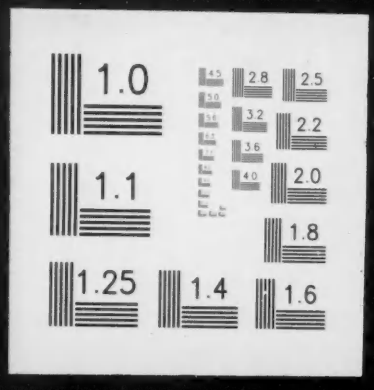
Climate Prediction Center, W/NP52
Attn: *Weekly Weather & Crop Bulletin*
NOAA/NWS/NCEP/CPC
5200 Auth Road
WWB, Room 605
Camp Springs, MD 20746-4304

UMI
Periodicals check In
P.O.Box 1346
Ann Arbor MI 48106-1346

WWCB 1

FIRST CLASS MAIL
POSTAGE & FEES PAID
NOAA
PERMIT NO. G-19

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300


1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6